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ROYAL COMM. ON COAL

MINUTES

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UNIVERSITY OF TORONTO

ROYAL COMMISSION ON COAL

SYDNEY, N. S.

September 17, 1945

VOLUME XLII

WITNESS

Page

Dr. L. E. Young 3744 - 3880

EXHIBIT

No. 203 - Report of Dr. L. E. Young
on Nova Scotia Coal Mines,
Part II 3797

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ROYAL COMMISSION ON COAL

Sydney, N. S.,
September 17th, 1945.

The Royal Commission on Coal convened at the Court House, Sydney, N. S., on Monday, September 17th, 1945, at 10:00 o'clock A. M.

Present:

The Hon. Mr. Justice C. C. McLaurin, Acting Chairman.

Angus J. Morrison, Esq., Commissioner.

J. J. Frawley, K.C., Commission Counsel.

Robert D. Howland, Secretary.

L. A. Forsythe, K.C., representing Dominion Steel & Coal Corporation Ltd.

J. L. Cohen, K.C., representing District 26,
United Mine Workers of America.

DR. L. E. YOUNG resumes stand and continues reading Exhibit 202, starting at page 21.

DEVELOPMENT PROGRAM

A detailed statement of development work done currently has been reviewed. The present rate of underground development, as to mine openings, entries, etc., in the coal is adequate to maintain the tonnage for the life estimated in the submissions. The statement of reserves shows that the Phalen Seam reserves at No. 2 Mine will be exhausted in six years, and that the Emery Seam reserves in No. 11 Mine will be worked out in four years.

BY MR. FRAWLEY - When you use the word "submissions" there, do you mean in the submissions made by the Dominion Coal Company?

A. That is right.

DR. YOUNG continues brief.

With the continuing increase in the percentage of the total tonnage coming from longwall mining, which means a larger recovery of coal per acre, as well as the lengthening of the walls, there has been some decrease in the amount of narrow work necessary to maintain the annual tonnage.

With the men available there is a good balance between

the tonnage coming from development and the tonnage coming from walls, rooms, and pillars.

The orderly development of mines so as to maintain production, including the driving of main and back deeps, main and low levels, headways, airways, and rake roads, requires a systematic program. Both the projection of this program and its practical prosecution must receive careful attention in order to provide territory for new walls when the operating walls reach the boundaries or the limits assigned to them.

In some of the longwall mines where the walls are 400 feet long and there are four walls projected on a straight line on the dip, this means that a lift of 1600 feet must be projected, and the development for the four levels and four walls must be completed before any of the walls are started.

The Company has made a careful study of ways of reducing this development cost in relation to the total length of walls, and the number of working-places made available in room and pillar mines.

In a normal year, the tonnage developed and made ready for production must be not less than the tonnage mined. The cost of this work is a substantial item for the field as a whole.

The total development costs for 1943 and 1944 are given on an accompanying sheet, and for one large mine the details are given separately for 1944.

BY DR. YOUNG - I would like to have permission to replace this next table with a revised one, the data of which would be changed for 1944, because only this morning, within an hour, my attention was called to the fact that whereas these were the proper figures given me by the Dominion Coal Officers several months ago, since then they have revised the cost development for 1944 and I have here the penciled figures and these show that the development cost instead of being \$720,330 for 1944 have been reduced to \$685,455. While this change is not significant and does not change any of my recommendations or conclusions, yet in order that the record may

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Dr. L. E. Young

be proper I would like to have permission to put in the revised sheet.

DR. YOUNG continues brief

DOMINION COAL COMPANY LIMITED

COST OF DEVELOPMENT

<u>Colliery</u>	<u>1943</u>	<u>1944</u>
No. 1B	\$ 69,467	\$ 89,079
No. 26	21,952	54,592
No. 2	---	---
No. 20	86,702	132,066
No. 4	70,349	82,881
No. 11	47,391	40,612
No. 12	26,021	14,322
No. 16	36,288	45,012
No. 18	80,947	92,741
No. 24	52,592	75,824
No. 25	<u>73,348</u>	<u>33,221</u>
Grant Total	\$525,057	\$720,330

Note: The above cost includes labor and materials
used in development.

BY DR. YOUNG - The following table is a detailed statement for the development program of 1B, and I am advised since I submitted this that the number seven deep of 600 ft. has been taken out and the total cost has been revised, and I similarly would ask the privilege of replacing this with a revised sheet, and I would say also that this does not change my conclusions or recommendations.

DR. YOUNG continues briefDOMINION COAL COMPANY LIMITEDNO 1B COLLIERY1944

Inside sinking South Motor Level		Main Deep	550 ft.
		Back Deep	570 ft.
No. 5 Auxiliary	Main Deep		350 ft.
	Back Deep		375 ft.
No. 5 South Longwall	Main Level		500 ft.
	Low Level		450 ft.
No. 4 South Longwall	Main Level		275 ft.
	Low Level		220 ft.
No. 3 South Longwall	Main Level		350 ft.
	Low Level		190 ft.
No. 5 Main	Deep		190 ft.
	Back Deep		180 ft.
No. 1 North 5 Deep	Main Level		580 ft.
	Low Level		620 ft.
No. 7 Deep			600 ft.

Total Cost - \$89,000

SECTION IVMINE PLANTS

While no detailed examination of the mine plants could be made in the time available, a brief inspection of the bankheads and surface plants of the various mines was made. Various underground hoisting, haulage, and pumping units were noted, having in mind the suitability and adequacy of the equipment and its condition as to maintenance and repair. Facilities for making repairs on the job underground, at the mine plant, and in the general repair shops were noted.

The equipment observed was in operating condition or was being taken care of by trained maintenance men. In general, the underground equipment being used was well-adapted to the work being done, except as to some of the mining equipment now operated by compressed air which should be electrified and certain haulages where it is now being planned to replace rope haulage with electric locomotives.

In considering the physical conditions that retard the introduction of mechanical loading devices and improvements in underground haulage, various factors must be considered in addition to those inherent in the coal seams, their pitch, etc. Of the mines now operated by the Dominion Coal Company, two were opened prior to 1900 and the remainder since that date; of these latter, five were opened between 1900 and 1925, and the remainder since that time. Some of the older mines, and the mines adjacent to them, have a track gauge of 30 inches and less, most of the latter mines having a gauge of 36 inches, and No. 25 Mine is the only one having a gauge of 42 inches. The largest capacity car now in service has an average content of 2.34 tons, but the No. 25 Mine car, which now has a capacity of 1.1 tons, can be increased to 3 tons capacity by the installation of side boards.

Following is a statement of the age of the mines, the track gauge, and the capacity of the present mine cars:

<u>Mine</u>	<u>Opened</u>	<u>Gauge Inches</u>	<u>Cars Tons</u>
No. 1B #	1924	36	1.81
No. 2	1899	36	2.00
No. 4	1866##	23½	1.08
No. 11	1913	26	0.8
No. 12	1908	30	2.34
No. 16	1911	30	1.32
No. 18	1938	30	1.07
No. 20	1939	36	2.00
No. 24	1919	36	0.9
No. 25	1940	42	1.1

Taken over by present company in 1894

Succeeding 1A opened in 1893

The reduction of underground haulage costs is essential. While the increase in the capacity of mine cars cannot be undertaken without great expense at most of the mines, much larger cars and faster haulage must be planned and installed, if substantial reduction is to be made in operating cost. This must

be accomplished at all mines whether or not face loading is mechanized.

When new mines are opened, the largest size cars that are practical, considering the dimensions of entries, haulage roads, and slopes, should be installed.

The present mine cars and the haulages are being maintained in good operating conditions.

Appendix II contains miscellaneous notes of the various mines visited, (which is at the back of the report and which will be passed over at this time).

SECTION V

SUBMARINE MINING

SUBMARINE MINING BY LONGWALL

Doubtless the Commission has had called to its attention the numerous engineering reports that have been made on the long series of experiments that resulted in the development of the present room-and-pillar and longwall mining practice.

Any change in mining practice requires a long period of time. Such a change may involve projection and development of new entries and new haulage roads, and the reorganization of ventilation, power distribution, and the handling of supplies. It may be necessary to train the workers to use and to maintain new machines. The supervisors also must be trained for these new methods and for planning and directing the new work efficiently.

The introduction of the longwall system in Cape Breton mines required a long period of experimentation and training and, for much of the area where complete mining is desired, the present methods have many advantages. Inasmuch as the reserves of good quality coal lie wholly within the submarine area, the system of mining that is to be projected and followed is one of the most controlling factors in determining the efficiency of future mining operations.

On account of the importance of longwall in the present operations of the Cape Breton field, the steps leading to the

development of the present methods are reviewed.

The Provincial law specifies that the minimum depth of cover under which mining may be carried on is 180 feet of solid measures but permits the driving of entries when there is cover of not less than 100 feet of solid measures below the sea bottom. In order to leave adequate protection to support the sea bottom, substantial pillars are left in room-and-pillar sections of submarine mines. The size of pillar varies with the depth and with the thickness of the seam. After 700 feet of solid cover has been reached, total extraction is practiced if there is 100 feet of solid cover for each foot of thickness of the coal mined.

BY DR. YOUNG - That means if you have two seams each of five feet, a total of ten feet, you ought to have one thousand feet of cover.

DR. YOUNG continues brief

Longwall mining in submarine areas was started in 1923 at Princess Mine where earlier attempts had been made to introduce longwall mining about 1889. This method was introduced because at the time it was the only method by which tonnage could be produced under existing physical conditions. There has been a great deal of progress from the mining by hand-pick on the first walls at Princess. Following the introduction of power-cutting machines on the longwalls, conveyors were tried in order to avoid the double-casting necessary to load the coal into mine cars.

Following the pioneering work at Princess, longwalls were started at No. 11, No. 12, No. 16 and Florence. During these early days much was learned in regard to roof support along the longwall face, the building of packwalls or midwalls, and the building of chocks. The so-called "caving system of longwall" was developed.

Experiments were carried on in steeply pitching seams (about 20 per cent) such as existed at the time in No. 10, No. 12, and No. 16. The relation of the direction of the walls to the "cleat" of the coal was studied at Princess. The difficulty of dealing with soft floor and heaving of the bottom was the basis

for investigation at No. 16 of the advantages of working walls up the dips and with stepped faces.

The problems of "roof-brushing" were receiving attention and the merits of longwall advancing and longwall retreating were being determined, particularly in relation to the construction and maintenance of haulage roads and airways. This retreating work was done largely at No. 14 and No. 16.

Extensive tests of longwall retreating methods were made in No. 1B, No. 2, No. 10, No. 12, No. 14 and No. 16, and it was found that while retreating in this manner did reduce the brushing and repair work on roads in the waste, it required driving narrow work long distances in the solid, and eventually the cost of drivage, plus that of maintenance, over the long periods of time necessary to get to the boundary and retreat back, made this method comparatively unattractive. In addition, gates crossing the laterals were necessary every 600 feet or so, and when the walls reached these gates there was always trouble in crossing the opening parallel to the face. Though at first glance, ventilating problems in retreating might seem to be simpler than in advancing, experience showed that better ventilation could really be secured on advancing faces, especially from the point of view of handling the drainage of gas from the gob. The result is that, with the exception of one colliery, all longwall in this field today is advancing along the strike.

Depth of undercut is from 4.5 to 6 feet and the length of faces from 200 to 400 feet. The system today is to hand-load on shaking conveyors taking the coal to a loading station, gate-end loader, or a belt, on the level below. On long faces, two shaking conveyors work in tandem. It is the practice to carry several walls in line or with only a small step.

Coal on the low side of the level is taken out with the advancing wall by means of a chain-and-flight conveyor. Stowage space is thus provided for the roof material taken down in brushing for the advancing road.

Where the coal is loaded on a belt, the belt is lengthened after every 50 feet of advance, and at the inby end there is a telescopic loader, mounted on a track, which can be retracted when it is not receiving coal from the shaking conveyors on the wall and the chain-and-flight conveyor on the dip side. By the use of this device, there is no delay in extending the best conveyor following each cut and the unit can be retracted easily to facilitate the brushing operation.

The best conveyor may be of any desired length, but sufficiently long to permit a full trip of empties to be pushed inby the loading head. In order to reduce the investment in the belt conveyor, expedite the haulage, and make back brushing less expensive, at Princess Mine a side loader has been developed. This, in fact, is an improved type of belt gate-end loader, 300 feet long, running on a track, with a chain-and-flight feeder on the inby end and a cross chain-and-flight conveyor on the outby end. The former receives the coal from the conveyors at the face and discharges on the belt, while the latter takes the coal from the belt and transfers it into the mine cars. The latter also serves as a small bin or hopper into which the belt conveyor may discharge if the car change is not rapid enough. The unit is operated by one compressed air motor. This type of unit was installed first in 1942 and four are now in use in Princess Mine. With full production of the walls, it was indicated that this equipment would handle a large tonnage with few delays, the peak loading rate being about 3 tons per minute.

The length of 300 feet permits the back brushing to be carried along on the off-shift without serious interference with other work, the rock being loaded into the trip of cars which can be switched under the scaffolding erected for the brushers.

When there are four walls in step, there is a concentration of production that requires good car-supply, good track, and efficient haulage on each level. With levels 400 to 500 feet apart, the walls are planned to advance a distance of approximately 8000 feet, depending on the spacing of deeps, etc.

The foregoing brief review of more than 20 years of pioneering in longwall mining under difficult conditions is presented in order to indicate how and why the present system of mining was developed. It should be pointed out that among the advantages won have been

- (a) the elimination of radialax cutting and the introduction of continuous cutting by chain machine,
- (b) the elimination of cars from the face,
- (c) the installation of shaking conveyors on the walls, and
- (d) improved secondary haulage.

Better control of roof and complete extraction of the coal are the chief reasons for the introduction of longwall mining. The continuing of longwall, with its disadvantages, appears to be a necessity for some time in some Cape Breton mines, but not to the complete exclusion of other methods. The decision to abandon the system wherever possible in Great Britain deserves most serious consideration.

In a later section of this report reference will be made to the use of mechanical loading devices on longwalls in Britain.

During the war, the difficulty of securing an adequate force to maintain the walls in proper condition has focussed attention on a number of the disadvantages of the system. The fact that no other system of mining has given better results in the Cape Breton Field under most difficult roof conditions is a tribute to the engineering and operating officials and to the mine workers who have made longwall a success. On the other hand, it must be pointed out that where physical conditions may not require such an expensive method of operations, full advantage should be taken of any less expensive systems of mining that may be applicable.

SECTION VIUNDERGROUND LABORUNDERGROUND DATAL LABOR

One of the most vital matters in the operation and management is the effective use of datal labor underground. The wage agreement is very specific as to the time that hoisting coal will commence on the day shift, namely, 7:00 A.M., "at which time the men must be in the mine". This is interpreted to mean that men are to be at their designated working places and ready to start work. "The day's work will cease at 3:00 o'clock, when all arrangements will be available for conveying men to the surface." The language of the contract fixes the hours of work as from 7:00 A.M. to 3:00 P.M., less the lunch period and the time necessary for the men to get to the man-rakes or other transportation facilities provided inside the mine.

BY COMMISSIONER MORRISON - Is that your interpretation of the eight hour day and the law in this Province, that men must be at their working places for 8 hours?

A. I am not trying to interpret the law. I understood it was accepted.

Q. I certainly never understood it that way.

A. Then I am in error?

Q. Definitely I would say so. Eight hour law is from bank to bank, that is the way we interpret it in the other Provinces in Canada.

A. I took the contract.

Q. The law supersedes the contract.

BY MR. FRAWLEY - It is the Coal Mines Regulation Act, is it Mr. Morrison?

BY MR. MORRISON - I am not too familiar with the Nova Scotia Act, but I am somewhat familiar with the Alberta Act.

Q. But in Alberta it is in the Coal Mines Regulation Act?

A. Yes, and the Wage Agreement.

Q. But as to the Statute you refer to, it is in the Coal Mines Regulation Act?

A. Yes.

Q. Does the Hours of Work Act in Alberta apply to coal mines?

A. No.

Q. So we find it in either the Wage Agreement or the Coal Mines Regulation Act?

A. Yes.

BY FREEMAN JENKINS - This is interpreted to mean that men are to be at their destination and ready to start work, that is not our interpretation of the contract, speaking for the Union. Our interpretation is that the man must be in the mine at 7:00 o'clock, and probably on his way to his working place.

BY MR. FORSYTHE - The law says you cannot keep a man working at his working place for more than eight hours.

BY MR. FRAWLEY - Section 95, sub-section 1, of the Coal Mines Regulation Act of Nova Scotia - I want to read it so that we will know if what you have said is contrary to this provision.

"Subject to the provisions of this Act, a workman shall not be employed at his working place below ground in a mine for the purpose of his work for more than eight hours during any consecutive twenty-four hours."

Is what you are saying in conflict with that?

BY DR. YOUNG - I don't think so.

BY COMMISSIONER MORRISON - I don't think it is Mr. Frawley; definitely not. We were given to understand when here last winter that the Statute here was the same as applied in Alberta, and that is surely not the Alberta provision.

BY MR. FRAWLEY - I take it he is not in conflict then, so we will proceed.

BY MR. JENKINS - Although it may seem that this is interpreted to mean that men are to be at their designated working place and ready to start work, does not conflict with the Statutes of Nova Scotia, but it does conflict with the Union's interpretation of the general agreement.

BY MR. FORSYTHE - The practical thing is what the people do. Are they at their work at 7:00 o'clock?

MR. FRAWLEY to DR. YOUNG

Q. Are you dealing with what actually transpires at these mines?

A. I was trying to find out how many hours a day they worked loading machines.

Q. Did you discover what the fact was?

A. Not any study, I didn't ride in or out, but just to get an idea of what are the run of mine working conditions, and I asked the company to give me some record of the travelling time, and there have been figures included in some of the submissions, and I got the record time the lamps are taken out of the lamphouse,

Q. The balance of your remarks are based on the interpretation that you set down of what that contract means. Mr. Jenkins has told us that the Union's interpretation is not the same.

A. The result of my report is not based on any assumption here. I was trying to find out how many hours a day loading machines were apt to be working under existing conditions.

DR. YOUNG continues brief.

In addition to actual observation as to the time the men leave the mines, two sources of information were available as to the time men spend underground and at their working places. In the statement by the General Manager of the Dominion Coal Company, filed with the Commission in 1945, (see Exhibit 15), the distance and time required travelling to or from the working face were as follows:

DISTANCE AND TIME TRAVELLING TO OR FROM WORKING PLACE

	<u>Transport (Ft.)</u>		<u>Time in Minutes</u>		<u>Transport</u>		<u>Walk</u>		<u>Total Time</u>	
	<u>Max.</u>	<u>Ave.</u>	<u>Max.</u>	<u>Ave.</u>	<u>Max.</u>	<u>Ave.</u>	<u>Max.</u>	<u>Ave.</u>	<u>Max.</u>	<u>Ave.</u>
Colliery										
o. 1B	22,000	19,500	4,300	3,700	40	32	22	20	62	52
o. 2	17,100	14,500	5,800	4,700	46	40	19	18	65	58
o. 4	20,950	17,000	6,700	6,150	47	37	30	27	75	64
o. 11	12,500	12,500	5,700	4,450	28	28	23	18	51	46
o. 12	16,000	15,200	3,150	2,450	45	43	17	13	62	56
o. 16	14,600	11,950	3,600	3,000	37	38	30	25	77	63
o. 18	6,200	4,800	1,200	700	19	15	20	12	39	27
o. 20	17,700	16,800	5,800	5,250	34	34	28	27	62	61
o. 24	16,400	15,500	2,900	2,050	34	32	17	12	51	44
o. 25			4,000	3,500			20	18	20	18
o. 26	16,400	6,400	1,800	1,500	32	32	10	8	42	40

Weighted average time, all collieries - .64 .55

The preceding table shows that the men are spending one hour and fifty minutes, on the average, in travelling.

The foregoing figures may be compared with corresponding data compiled by the Dominion Coal Company in 1924 and 1931 and made available to me by the Company's officers.

DOMINION COAL COMPANY LIMITED

Statement showing the average
Length of Walk in Miles per
Contract Miner

<u>Colliery</u>	<u>Average Walk per Man, Mines</u>	
	<u>1924</u>	<u>1931</u>
No. 1B	0.7	0.9
No. 2	1.6	1.1
No. 4	3.3	1.7
No. 5	2.4	0.7
No. 10	2.4	1.3
No. 11	1.8	1.1
No. 12	1.2	0.8
No. 14	1.2	0.9
No. 16	0.9	1.3
No. 24	1.2	0.9
All Collieries	1.84	1.05

While some mines have been closed and new ones opened since 1931, in general the average condition appears to have improved somewhat.

In order to have a check on the time the men actually spend in the mines, the record of the time the lamps are taken out of the lamphouse was prepared (under date of July 27, 1945). This record shows the total time the lamps were out of the lamphouse, and from this time would have to be deducted the average travelling time, in order to learn how much time the men actually spent at work.

For example, if the miners at No. 4 Mine had their lamps out 6.7 hours and the average travel time was 128 minutes (say 2 hours), it is obvious that these men spent not more than four hours at work. If the miners at No. 1B spent 7.9 hours in

the mine, of which 104 minutes were spent in travelling, then they spent 370 minutes, or 6 hours and 10 minutes, at work. These men are contract men and leave the mine whenever they choose to stop work for the day.

BY COMMISSIONER McLAURIN - I suppose the miners position would be that they are working while engaged in travelling, while it may not be productive work.

A. I don't know how the miners would feel about it. My analysis of it is that I think it is in the interests of the coal industry that facilities should be provided so that the men will spent less time travelling and more at the working face. If you are going to use machinery you are going to use it, and how are you going to get at it.

DR. YOUNG continues brief

Under the task system, now in effect, when datal men complete their task, they leave the mine and refuse to do other tasks unless they are paid an extra shift. Day men, working on any classification, leave the mine when the work coming under that classification has been completed for their section of the mine.

Under the Contract, the datal men "shall do any class of work in and around the mine that the management may require of them, provided they are paid scale price for such work."

BY DR. YOUNG - That is a quotation from the Contract.

Continues brief

An examination of the foregoing records indicates that the Management is not following the provisions of the Agreement. In the case of No. 4 Mine, the record shows that 39 drivers had their lamps out 6.5 hours and with the travelling time of 128 minutes (say, 2 hours), it is evident that the Company found work for them only 4.5 hours.

BY DR. YOUNG - The following page is a table showing these figures, which cannot be read very well. This is an official statement from the Comptroller's Office of the Company prepared for me July 27th, 1945.

DOMINION COAL COMPANY LIMITEDSTATEMENT OF AVERAGE HOURS WORKERS ARE IN THE MINEBASED ON TIME LAMP IS TAKEN OUT UNTIL LAMP IS RETURNED TO LAMPHOUSE

<u>Colliery</u>	<u>Brushers</u> (Contract)		<u>Minors</u> (Contract)		<u>Trip Riggers & Enginemen</u> (Datal)		<u>Pipemen</u> (Datal)		<u>Drivers</u> (Datal)	
	Ave.		Ave.		Ave.		Ave.		Ave.	
	No. of Men	Hrs. per Day	No. of Men	Hrs. per Day	No. of Men	Hrs. per Day	No. of Men	Hrs. per Day	No. of Men	Hrs. per Day
No. 1B	18	8	271	7.19	3	8			8	8
No. 2	8	6.6	262	7.6					33	7.2
No. 4			231	6.7	2	7.2	4	6.8	39	6.5
No. 11			139	7	4	7.2				
No. 12	23	7.3	103	7.6						
No. 16	36	8	169	8						
No. 18			137	7.2						
No. 24	2	8	192	7.5	6	7.2				

<u>Colliery</u>	<u>Landing Tenders</u> (Datal)		<u>Rollermen</u> (Datal)		<u>Roadmakers</u> (Datal)		<u>On-setters</u> (Datal)	
	Ave.		Ave.		Ave.		Ave.	
	No. of Men	Hrs. per Day	No. of Men	Hrs. per Day	No. of Men	Hrs. per Day	No. of Men	Hrs. per Day
No. 1B					2	8		
No. 2	28	7	4	6	4	6.5		
No. 4	16	7.5			11	7.4	4	7.7
No. 24	8	7.8						

Comptroller's Office,
Sydney, Nova Scotia,
July 27th, 1945.

The system of employing datal workers to perform certain tasks and releasing them when such tasks have been completed, appears to be very fair, but it has developed practices and customs that stand in the way of progress. The task system grew up when the Dominion Coal Company was struggling to get the conveyors started about 1926. Men paid by the day were permitted to go home as soon as they had finished a designated task. On the longwall work, this applies to pan-movers, chock-drawers and helpers, longwall pipe-fitters,

pack-builders, and face-spraggers. All the other men on the walls are paid by the ton.

SECTION VII

UNDERGROUND

MECHANIZATION

Effort Saving

In considering the underground work that can be mechanized, the first objective should be the safety of the men, the second, reduction of physical effort, and, the third, increased production per man hour.

Among the first operations the mechanical mining engineer worked on were cutting the coal and hauling the coal. Later, drilling was mechanized. Having mechanized cutting, drilling and hauling, the operation that has been receiving most attention in the last 25 years has been the elimination of shovelling to as great an extent as possible. Loaders, scrapers, duckbills, etc., have been designed and applied for a number of mining conditions. These mechanical loading devices have been applied most extensively in room and pillar mining and in the loading of rock in cross-measure tunnels. For longwall mining, there are several well-designed machines which are now being used successfully in Britain under conditions somewhat comparable with the Cape Breton conditions.

In Cape Breton mines, the most arduous underground work appears to be in car pushing, pan shifting, chock drawing, and building packs.

With the installation of certain types of loading equipment, the car pushing can be eliminated. The pan shifting is a difficult problem and some of the plans, now under consideration, may reduce the amount of physical effort required during the life of a wall. Mechanical devices to assist in drawing tight chocks are being considered and the subject deserves most serious consideration from the standpoint of safety, physical effort, and the salvaging of timber.

Building of packs is an established practice in Cape Breton. In another section, reference is made to the British system of roof support in longwall mining. The most common practice there is to build so-called "strip-packs" and this corresponds to the Cape Breton practice of building mid-walls.

There have been many suggestions as to methods of mechanizing the packing, or stowing, operation, but it is questioned whether any of them would prove much of an improvement over the system now used. The solid stowing of the mined area has questionable value for Cape Breton conditions and, therefore, both hydraulic and pneumatic stowing are not applicable. Mechanical devices, such as mechanical shovels, drag-line scrapers, short high-speed belts, or rapidly rotating blades to throw material into the gob, have all been suggested and tried, but with little or no success. For Cape Breton pitching coal seams, they have no application.

The British engineers think the whole question of mechanized stowing is in need of investigation on a large scale and they recommend that "coordinated research with financial assistance from the Industry should be undertaken on systems and appliances." (Report of Technical Advisory Committee, Ministry of Fuel and Power, page 63).

It is my suggestion that in Cape Breton mechanical loading on the longwall faces be perfected first, and, if more rapid advance of the face is practical, there will be a greater need for a less laborious and speedier method of building pack walls. When that time comes, research and inventive genius should be able to devise a practical aid or machine for work on pack walls.

Difficulties of Face Mechanization

Mass-production methods of modern factories may be thought of as typical of a mechanization program, but as a matter of fact the underground conditions under which coal is produced are not comparable to a factory.

BY DR. YOUNG - I mean typical of a mechanization mining program underground.

Continues brief

First, a factory is out in the open, accessible from all sides, and remains day after day and year after year on its permanent foundations. Second, while the weather and the seasons change, the general physical conditions surrounding the factory remain the same. In contrast, when a coal mine is mechanized, the roof, the floor, and the seam conditions may change from day to day, and the whole producing section, the longwall or the panel advances or retreats and is, in fact, a production unit (or factory) that is ever on the move.

Therefore, while production engineering methods are needed in a mechanized mine or section of a mine, such methods cannot be applied in the same manner as in a factory. Moreover, the work in a mechanized mine, generally is more interesting and diversified -- (as compared with work in the production line in a factory) -- and in the long run men prefer this type of work because it is generally safer and less strenuous than the routine loading of coal with a shovel.

Effective use of Plant and Machinery

The modernization of mine plants and the introduction of expensive machinery require multiple-shift operation of surface and underground machinery and of the working places that produce coal. The hourly and daily tonnage produced from each working place is one of the best indicators of efficient operation. This requires not only good planning, well-maintained equipment, adequate and reliable power, but also well-trained and reliable workmen who work every day that the mine works.

In order that excessive peak loads on the power system may be avoided, it is necessary to schedule the use of power on any extensive system or hook-up. With mechanized mining, there will be an increased use of power for certain operations and a more concentrated load in the producing sections of the mines, during certain hours of the working shift. Scheduling of work

is vital, and, as stated, the success of the mechanized work depends upon the coordination of the efforts of a team of skilled men.

EXPERIENCE REGARDING MECHANICAL LOADING IN THE UNITED STATES

Any detailed statement as to the extent and progress of underground mechanical loading in the United States is unnecessary as the statistics are well-known. However, some of the factors that have contributed to the consistent progress are not known and are not appreciated generally.

The success attained by mechanized mining in the United States has been in large part the result of intelligent decisions, arrived at through collective bargaining. Among the most important of the now well-established fundamentals are:

1. Both management and labor must share in the benefits of mechanization.
2. Management must be free to plan the mining work, change mining methods, direct the working force, and assign men to various classifications of work, as occasion requires during the working shifts.
3. To justify large capital investment in various types of mining machines, these machines must be productive at least two full shifts a day and must be kept in good working order by well-trained maintenance crews. In the early development days of American mechanization, failures of machines, - partly due to poorly designed equipment and partly due to dilatory maintenance, resulted in the serious evil of sending operating crews home and paying them for the actual hours worked, unless other work was available (which generally is not the case in a completely mechanized mine).
4. The operators of mechanical loading devices and the men who maintain them, together with those who cut, drill, and shoot the coal would be well-trained, well-paid men who are dependable and want to work every day. They are part of a picked crew in which team work counts.
5. Datal rates should be the uniform basis of pay and

the establishing of tasks and the limiting of the output of machines and of men are not tolerated.

BY DR. YOUNG - I want to say that 100% of the mechanical use of mchine machines in the United States is on a day's pay basis and there is no piece-work on loading machines in the United States that I know of.

DR. YOUNG continues brief.

In order that the evils of the piece-rate system may be appreciated, the following conclusions, based upon 25 years' experience, should be noted:

1. In mines where coal-seam conditions vary, there is difficulty in getting good men to work in the poorer places when they are employed on a tonnage or a piece-work basis.
2. There have been many improvements in mining machinery since the first machines were installed, and there will, undoubtedly, be a great many more improvements in the post-War period. This is true also of the auxiliary equipment and of mining technique. The use of larger mine cars, larger shuttle cars, larger-capacity conveyors, all result in the more effective use of face-equipment without any increased effort on the part of the machine operators. Many loading machines are not operating a sufficiently large percentage of the time, through no fault of the machine operator, and substantial increases in output can result from improved management with little extra effort on the part of the loading-machine operator.
3. Cutting, drilling and shooting practice can be supervised better when men work on a day basis than when they are crowding a machine to get tonnage.
4. Where systematic face timbering is required, it is difficult to get tonnage men to set and re-set necessary roof supports. Men work more carefully and more safely when they are operating equipment at a proper tempo and not taking risks to make a quick clean-up in a minimum number of hours.
5. In both development work and pillar work on breaklines, it has been found more practical to organize the work on a day basis.

6. Where there are partings in the seam and the machine must work part time in coal and part time in waste, it has been found impracticable to work on a tonnage basis.

7. The management must have full authority to vary the size of crew, switch men about when necessary, and do various things to secure efficiency. On a tonnage basis this cannot be done without causing confusion.

8. When working places are double-shifted under tonnage-rate conditions and there is more or less deadwork to be done, it is difficult to secure a fair tonnage from both shifts, as the tonnage men on one shift wish to load all the coal possible and leave the preparation and deadwork for the succeeding shift. When tonnage men clean up a cut near the end of a shift, they often do not move the equipment so that the men on the next shift may start production immediately upon arriving at the working-place.

9. Maintenance of equipment, economy in use of supplies, recovery of supplies, etc., all play an important part in securing low costs. Tonnage is only one factor to be considered in efficient mechanization.

10. When the piece-rate system is employed and equipment fails, the mine worker loses,- sometimes due to inefficient management. When equipment fails and production stops on the day-pay basis, the company loses and not the man,- so that such interruptions of production become a real challenge to management.

For these reasons, as well as others that may be mentioned, in the interest of the working force, as well as the management, it has been found most desirable in mechanized bituminous coal mines in the United States to employ the system of paying by the day and hour.

Importance of Seam Conditions

Largely in order to determine in a preliminary way the suitability of the various Cape Breton mines for mechanical loading, an inspection was made of representative working places in all the mines of the Dominion Coal Company and Old Sydney

Collieries.

In many parts of the Cape Breton coal field, due to the poor roof, the depth of cover, and the pitch of the seams, the conditions are not favorable for the use of machine loading machines. The average grades of working places are shown on the accompanying table.

DOMINION COAL COMPANY LIMITEDGRADES OF WORKING PLACES (1945)

<u>Colliery</u>	<u>Working Place</u>	<u>Average Per cent</u>
No. 1B	No. 5 Deep	18
	No. 7 Deep	23
	No. 6 Deep	36 #
No. 2	North Deep	5
	No. 3 Anglo Deep	11 ##
	South Deep	6
No. 4	Main Deeps	8
No. 11	Main Deeps	7.3
No. 12	Main Deep	17
	West Walls	16
	West Walls	15
No. 16	East Walls	13
	Main Deeps	20
	Auxiliary Deeps	21
	West Walls	27
No. 18	Main Deeps	28
No. 20	No. 2 South Headway	9
	No. 1 North Headway	9
	Longwall Deep	8
No. 24	Main Deeps	8.4
No. 25	Main Deeps	4
No. 26	South Headway	20
Princess	South Walls	10
	Main Deep	8
Florence	Main Deeps	7.9
	Auxiliary Deeps	7.8
	South Walls	10.4
	North Walls	6

Steepest pitch at working face

Full pitch

BY DR. YOUNG - I am now coming to some notes on the different kinds of mechanical loading devices and equipment.

DR. YOUNG continues briefDuckbills

The first type of mechanical loading device to be tried in the Cape Breton field was the duckbill and experiments were carried on during the years 1927 to 1931. The following statement describes the early efforts of the engineers and mechanical staff of the Dominion Coal Company:

"In 1928 a duckbill of the ratchet type was tried in a single place. This type was not suitable, and was discarded after a very short trial. The second experiment with the duckbill was carried out in No. 2 Colliery in 1928. This duckbill was developed in the Company's work shop, and the experiment was abandoned, to allow perfection of the extension mechanism.

The third experiment with duckbill loading was in No. 4 Colliery in 1929, and a duckbill invented by two members of the Company's staff was tried out in a heading. In all cases the duckbills were driven by Flottman shaker engines of the 400 type. This machine was subsequently moved to No. 1B where the experiment was continued until May, 1932.

In the early experiments with duckbill loading, the working place was cut with a radial coal cutter in the centre of the seam, the bench being shot first and cleaned out by the duckbill loader. In the last experiment at No. 1B Colliery, a Samson chain coal cutter was used, cutting at floor level. Due to the time required for extending and shooting the whole seam, and the close timbering necessary, the average number of cuts obtained was $1\frac{1}{2}$ cuts per shift. Although occasionally two cuts were made, in general the operation was not much better than we were getting at that with hand loading, and the experiment was abandoned."

BY MR. WADE - Where is the statement from, Dr. Young?

A. It was given to me by officials of the Dominion Coal Company. The following statement prepared by the engineers of the Coal Company..

BY MR. FRAWLEY - At your request?

A. At my request.

DR. YOUNG continues brief

At the Franklin Mine of the Bras d'Or Coal Company, operating in the Upper Jubilee Seam, shaking conveyors with duckbills have been in successful operation for several years. There are four units installed and three more under order. All

of the equipment, including shortwall cutting machines and drills, is operated electrically. The practice in general is to drive headways up the pitch with the duckbill and to turn rooms on the strike. Pillars are not mined. The system of mining is being modified to permit concentration of work and the more effective use of the equipment and of the working force. Considering the coal seam and roof conditions, good progress is being made with this equipment.

Power Duckbills

Recently there has been developed a type of duckbill which requires much less manual labor, because the duckbill can be swung across the working place under power, whereas when the standard duckbill is moved across the face, it must be pulled by hand or by another machine or pushed by means of a bar. This improvement not only reduces the labor at the face and increases the effective capacity of the duckbill, but permits the more convenient use of power in shifting pans, the duckbill itself, and auxiliary equipment and supplies. This is important particularly in working in rise workings, as well as where there is a cross-pitch.

BY DR. YOUNG - This is not properly mechanical loading, but they use hand-loading on conveyors here on longwalls and in many places on chain-and-flight conveyors, but not in this field.

DR. YOUNG continues brief.

Hand Loading on Conveyors

While the use of duckbills and special loading pans is considered mechanical loading, the hand-shovelling on conveyors is not, and there are many room and pillar mines in the United States where hand loading on conveyors has proved to be more efficient than any other method. This is true particularly in areas where the tender roof may require closer timbering than would permit the moving of loading machines, shuttle cars, and the use of duckbills, angle-troughs, etc. This practice also permits the more complete extraction of pillars and the manual removal of dirt bands, partings, and other impurities in the seam.

While the total tonnage and the percentage of the United States production that is hand-loaded on conveyors, exceeds the tonnage loaded by duckbills, the tonnage loaded annually by duckbills is increasing rapidly and the tonnage hand-loaded on conveyors is decreasing gradually. It may be presumed that this trend will continue and that the duckbills will soon surpass the hand-loading on conveyors.

The extensive use of shaking conveyors on longwalls in Cape Breton has permitted great concentration of workings and the production of large tonnages from single haulage roads. There remains, however, the job of shovelling into conveyors, which, under the conditions prevailing in the longwall face, is very difficult to mechanize.

Scrapers or Slushers

These have been used extensively and successfully in many hard rock mines and in the Pennsylvania anthracite fields, but their use in bituminous coal mines of the United States has been declining rather than increasing. It should be noted, however, that there are a number of very special applications of scrapers which are particularly successful. In one application the equipment consists of steel boxes with self-dumping bottoms, a self-centering deflector (which enables the box to be pulled to any desired angle or position), and a loading ramp over the entry on which the boxes are pulled by a two-drum scraper. The boxes are only 12 inches high and may be loaded by hand or by mobile loading machine in low-height coal. With two boxes in service the loading of one box may continue while the other box is being dumped. On account of its flexibility, this type of equipment has advantages in pillar-work in low coal.

In Western Canada, in mines where the use of electricity is restricted, scrapers are being employed both on longwall faces and in rooms in conjunction with conveyors.

About 1930, some work was done in the Cape Breton Field with scraper loading, using the box type of scraper with a hinged flap at the end. As the results secured were not

encouraging, the work was abandoned.

In the Springhill district, some work was done in thin seams with scrapers that were not self-loading; the coal had to be shovelled by hand into the path of the scraper. While the equipment proved to be satisfactory from a mechanical standpoint, it stirred up a great deal of dust, the bottom was loosened by the travel of the scraper, and considerable of this dirt was loaded with the coal. While the use of the scrapers did not result in any marked improvement in the output per man, it did make possible a system of suitable development work for longwall retreating. With the change to longwall advancing, the scraper loading in this class of work was abandoned, but in certain operations at Springhill scrapers are still used to take coal away from the face.

Mobine Loaders

Detailed description of the various types of the mobine loaders and of necessary auxiliary equipment is unnecessary in this connection. Briefly, practically all of the loading machines in use in coal mining are powered by electricity, but some of the smaller track-loaders are operated by compressed air.

In general, they may be classified as (1) track-mounted, (2) caterpillar-mounted, and (3) rubber-tired. The last is not important at this time, but there are two rubber-tired machines in the experimental stage. (Reference will be made later to combined cutting and loading machines and to other machines designed for longwall work.)

The track-mounted type of loader has been installed extensively in the United States and can be used where grades permit the operation of standard electric locomotives. These machines are usually of large capacity and will load coal or rock into mine cars. With swinging rear conveyors they can, when occasion requires, dispose of rock alongside of the roadway back from the face. In the Cape Breton Area such machines could be used where the pitches are low, or for driving cross-measure development in rock. For this latter work, however, it is

probable that machines designed for rock would prove more serviceable.

The pitch of the coal seams is one of the most important factors in determining the extent of the practical application of caterpillar-mounted loading machines. If one unit is placed in an opening driven on the strike and the pitch is so steep that the machine cannot be moved quickly and conveniently to a nearly working place, then the machine will have to operate in one face only. The capital investment for a cutting machine and a loading machine would generally not be justified on account of the small tonnage that can be prepared by one cut in a place. When the equipment can be moved so that it can serve at least two places, the capital cost may be justified, providing other operating costs are not too high.

The loading machine of this type may be used to load

- (a) standard mine cars
- (b) rubber-tired shuttle cars, or
- (c) conveyors.

When conveyors are installed to take the coal from the loading machine, one machine generally services two places (sometimes three). When the machine is loading into mine cars, the number of places should be adequate to keep the crew busy performing their various operations, without causing one operation to wait on another (unless small crews are used and the skilled men are expected to do any class of work necessary).

With machine loading machines loading into conveyors, the mine roof supports may generally be planned to permit the movement of the small-size loading machine which is generally selected for this class of work.

Where roof conditions permit travelling roads 10 feet wide and the pitch is not too severe, rubber-tired shuttle cars can be used to receive coal from the loading machine. These self-unloading cars travel along the roadway or through the room to discharge the coal onto a belt conveyor, into a transfer elevator which loads into mine cars, or directly into mine cars.

One of the most important factors in the use of mobile loading machines is the transportation of coal away from the loader. The loaders, depending on their size and power, will load coal at the rate of 1 to 8 tons per minute.. If the coal is loaded by a machine on a conveyor, the capacity of the loader will be limited by that of the conveyor and usually it is not to exceed $1\frac{1}{2}$ tons per minute. If the machine loads into mine cars, running on rails, the rate of loading will be limited by the size of the mine car and the time required to switch out the load and set in another empty. With large cars there will obviously be greater opportunity to load out the coal quickly, if there is only a short haul to the nearby sidetrack. When the mine is handicapped with small mine cars, it may be possible to service the caterpillar-mounted loading machine with rubber-tired trucks or shuttle cars of capacity greatly in excess of the mine car. These shuttle cars may carry the coal to the entry and transfer the coal to a trip of cars or to a belt conveyor.

These electric-powered shuttle cars may be from 2 to 10 tons capacity, be driven either by storage battery or trailing cable, and are generally self-unloading. They are operated by one man and travel from 3 to 5 miles per hour, depending on grades, load carried, size of motors, clearances, character of floor, etc.

Each of the foregoing types of equipment has been proven and has been used extensively in both the United States and Britain. At the present time there is no mobile loading equipment used underground in Cape Breton.

Statements are on file as to the effort of the Dominion Company to introduce mobile loading machines in the No. 20 Colliery in 1937.

Longwall Loading Machines

There are several types of equipment, chiefly of British design, which are being used on longwall work in Britain. The most successful of these is a combination cutter-and-loader

which has been in the process of development for a number of years. Since 1934 the machine has been proving itself under average British longwall conditions.

DR. YOUNG: I might say that I was in two mines using this type of equipment in November 1944 near Sheffield. (Continues brief):

The original machine consisted of a coal-cutting machine and a mechanically-operated loader, working together as a unit, and so designed that the unit could cut and load alternately forward and back along a wall. In order to eliminate the boring and shooting, it was thought advisable to introduce a shearing element.

In 1941 the Bolsover Company at its Rufford Colliery (that is near Sheffield) undertook to assist in the development of the machine for its conditions. A new machine was designed and put to work in December, 1941. The officials of the Bolsover Company said,

"We were then, and still are, of the opinion that any method of mechanical loading on a longwall face which relies upon blasting as a means of coal preparation is not likely to be of general application, nor is it likely to produce the proportion of large coal necessary to enable the system to work as a commercial proposition."

Under their roof conditions they decided they must avoid heavy blasting, partly on account of the uncertainty in keeping the holes from being bottomed against the tender roof.

Experiments were continued for some months and much valuable information was collected as to the mechanical features of the machine, the best methods of operation, and roof control under their conditions.

A re-designed machine was installed in February, 1943, with the loader portion so designed that it could be connected to a standard coal-cutter. The new machine was an improvement and the output per man for the crew as a whole improved.

The seam worked at the Rufford Colliery is at a depth of 2020 feet. The full section of the seam, including dirt bands, is 4 feet 9½ inches. Above this is 1 foot 2 inches of coal

which is left to form a roof. The floor is hard. The face is 130 yards in length. Along the face there are 3-yard packs with 8-yard waste which system provides good roof control. Two chocks are erected in waste. Chock releases are used. The roof at the face is supported on corrugated steel bars each 7 feet long set at intervals of $4\frac{1}{2}$ feet on two steel props.

The details of the operation and labor force required are set forth in a paper recently submitted to the Institution of Mining Engineers by T. E. B. Young and W. H. Sansom. Originally a 26-inch top-loading conveyor was installed, but later a 26-inch bottom-loading type was installed with satisfactory results.

The significant points from an operating standpoint are as follows:

Labor Force and Output per Man-Shift with $5\frac{1}{2}$ -Ft. Cut

Working on machine	6
Cutting out right-hand stable	2
Cutting out left-hand stable	3
Timber supplies	2
Face-conveyor motors	1
Turning machine round	2
Packing, chocking, and drawing off	7
Erecting and dismantling	4
Ripping	9
Total	<u>36</u>
Average daily output	324 tons
Output per faceman/shift	9 tons

The paper by Young and Sansom includes the following summary:

"Perhaps the best comparison with former methods is to take men concerned only with the filling and preparation of coal, as all other grades are common to both the old system and the new.

Men employed with the cutter-loader -

On the machine, team including timbering	6
Getting out stables	5
Turning machine round	2
Total	<u>13</u>
Output per man-shift	24 - 9 tons

With ordinary machine mining -

Fillers	18
Cutters, gummers, and cleaners	3
Borer	1
Shot-firer and mate	2
Total	<u>24</u>
Output per man-shift	13 - 5 tons

There is thus a saving of 11 men per day and an increase in tons per filler of 11.4 tons per man-shift.

But there is an important point here to note. The work involved for all men, with the exception of those getting out stables (that is, opening the ends of the wall) is very much less laborious than that of filling-out a stint, particularly at this colliery where high outputs per filler are obtained. This has made it possible to employ in the team men who, through physical disability, are not capable of filling-out a stint, especially men who have been good colliers but who through age, illness, or accident are no longer capable of keeping pace with other more active men. The lighter work, coupled with the fact that the men are now working as a small team, has resulted in a reduction of absenteeism which is very striking, and, curiously enough, the attendance is also much better than the average for the pit.

The actual figures of absenteeism, voluntary and involuntary, for the facemen working on the power-loading face, compared with those of the facemen in the rest of the mine for four consecutive weeks are as follows:

	<u>Power-Loading</u> <u>Per cent</u>	<u>Rest of Pit</u> <u>Per cent</u>
First week	10.9	29.3
Second week	9.4	26.3
Third week	9.3	24.5
Fourth week	9.1	27.2

1 The men employed at "other" work on the power-loaded face were not picked men, having been transferred en bloc from another district which had reached the boundary.

A possible explanation of this improvement in attendance may be that the use of the cutter-loader does make lighter the work of facemen on such work as packing, ripping, and drawing-off supports. After the machine has gone through the face is left perfectly clean and therefore the work of the packers and timber-drawers is eased. Again, at the commencement of the rippers' shift and the gate-side pack holes are clear of gummings and dirt, and the rippers are not hindered by the passage of the machine across the gate. The dismantling and re-erection of the belt in the new track is, of course, simplified by the clean condition of the face.

All the men working with the machine are most enthusiastic about their work. When men have been transferred from filling-out a stint to this work for a day, owing to the absence of one of the regular men, they have invariably asked to be allowed to remain.

Since the first of the latest type of machine was delivered, three more machines have been obtained and the results so far have been highly satisfactory and comparable with those quoted.

With the application of mechanical loading, meticulous attention must be devoted to detail both by officials and workmen. It is of the greatest importance that a scheme of operation should be drawn up in

detail and operated in all respects. And last, but not least, there must be a team-spirit amongst the men, particularly on the coal-turning shift." #

Transactions of the Institution of Mining Engineers, 1945, Vol. CIV, p. 191.

In a communication of August 24, 1945, from the managing director of the company manufacturing this machine, he wrote to me, after specifying a limitation of 15 per cent gradient as the maximum for operation of the cutter-loader, with the machine operating in both directions:

"Any steeper gradient than this will require further consideration because of the following points:

(1) There may be a tendency for the cutting jibs (bars) to become fast, due to gummings (cuttings) following the jib when cutting down-hill on a very steep grade.

(2) There may be a tendency for the coal to fall beyond the loader when loading u-hill, but this depends on the height of the seam.

(3) It may be possible, on steeper grades than 15 per cent, to cut and load up-hill and flit back, or it may be possible to arrange a machine so that the loader itself remains substantially horizontal whatever the grade.

A thin-seam model is now being designed which will have a maximum height of 2 feet and which will be fully powered to operate in seams from a minimum of 2 feet 9 inches. With this new design, it is envisaged that we shall be able either to undercut, overcut, or both, and that the turret will be of the raisable type so that this machine may be able to deal with all seams from 2 feet 9 inches upwards. As in the present machine, a back shearing device will also be fitted."

This longwall cutter-loader deserves most serious consideration for those longwall mines, or portions of mines, where the pitch of the seam and the roof conditions will permit its efficient use.

Inspection of Mines

Proposals have been made from time to time in regard to the mechanization of sections of certain mines. Inspections were made in order to check the physical conditions of the seam, roof and floor conditions, and such other factors as may have a bearing on the use of mechanical loading devices. These inspections were made with members of the engineering and operating

staff of the several companies, and Mr. H. R. Wheeler, Consulting Mechanization Engineer for the British Ministry of Fuel and Power. In addition to having wide knowledge of American mine mechanization, Mr. Wheeler has been assisting the British coal mining industry in installing mechanical loading devices in Britain in order to increase production during the War.

Among the mines visited were the following:

Mine No. 25, Dominion Coal Company
Mine No. 24, Dominion Coal Company
Mine No. 4, Dominion Coal Company
Mine No. 20, Dominion Coal Company
Princess Mine, Old Sydney Collieries

While for several of the collieries named several different machines and methods might be used effectively, it is proposed that trials be made at two or more mines to demonstrate what can be done with different types of equipment, selecting in each case that equipment which appears to be best suited to the local conditions.

Suggestions for Room-and-Pillar Tests

The following mines have been selected as being most favorable for demonstration purposes:

Mine No. 25. I suggest the installation of one unit of caterpillar-mounted loaders and rubber-tired shuttle cars, shortwall cutting machines, and caterpillar trucks to move the cutting machines; belt conveyors for secondary haulage, and much larger mine cars for the mainhaulage as soon as mechanical loading has proven satisfactory.

Mine No. 24. I suggest one unit of shaking conveyors with duckbills and shortwall cutters; belt conveyors for secondary haulage, and larger cars for the main haulage. All brushing should be eliminated except on the main haulages.

Mine No. 4. I suggest one unit of caterpillar-mounted loaders with 15-inch chain conveyors and shortwall cutters. If roof conditions are not found to be too difficult, shuttle cars and arc-shearing machines could be installed in order to secure the greatest economics. Mechanization of pillar recovery

should be deferred until experience and judgment, gained as the result of the program stated above, indicate the proper course to be taken in pillars. Belt haulage would be advisable when tonnages to be handled can be determined.

Mine No. 20. I suggest one unit of caterpillar-mounted lading machines loading on 15-inch chain conveyors and shortwall cutters; belt conveyors for secondary haulage, and larger cars for main haulage.

Dr. Young: These previous ones relate to room-and-pillar mines as such. I realize of course that Princess Mine is a long-wall mine and possibly there should be a different heading here in these notes. (Continues brief):

Princess Mine: I suggest one unit of caterpillar-mounted loading machines loading on 15-inch chain conveyors and shortwall cutters; belt conveyors for secondary haulage, and larger cars for main haulage.

Suggestion for Longwall Tests

Longwall Cutter-Loader. I suggest that one cutter-loader type of longwall machine be installed on a longwall face where the seam, roof, and pitch are favorable, providing the face conveyor equipment and haulage are comparable to that which is being used successfully in England.

DR. YOUNG: I mean by that, that in England they are taking the coal from this cutter-loader on to a belt conveyor and have other arrangements for taking it away. That conveying equipment would have to be planned depending on the type of cutter-loader that would be tried out. (Continues brief):

On the pages immediately preceding, a brief statement of suggestions for mechanical loading has been presented. All tests and experiments should be made a part of a coordinated program, if any real effort is to be made to mechanize the loading operations.

In order to follow through a Mechanization Program, it is essential not only that the general objectives shall be stated

in specific terms, but also that the various successive steps be set forth in the order in which they must be considered, so that decisions may be made and appropriate steps be taken.

The several successive steps in an Underground Mechanization Program, the proposed work in providing coal preparation facilities, and the other improvements to be developed by long-range planning, are coordinated in Section X.

SECTION VIII

COAL PREPARATION

Post-war competition and proposed mechanization will probably increase greatly the problems of coal preparation. Except for the washing unit at the steel plant, there are no cleaning plants in the Cape Breton Field.

The number and thickness of bands of shale or other impurities in the seam, the nature of the roof and floor of the seam, and the system of mining determine the amount of impurities in the coal as it is delivered to the surface. The large pieces of waste or inferior coal can be removed manually at the bankhead on picking tables, but refuse or bone less than 3 inches in size can be removed best by mechanical methods. If the waste material is friable or is disseminated through the coal seam, some type of mechanical cleaning is generally essential. When possible, the minus 1/4 or 3/8 inch size is marketed without mechanical cleaning. If the fine sizes require cleaning, a dry system is frequently used in order to avoid the necessity for drying following wet washing.

Mining Practice

In general the roof in the Cape Breton mines is only fair. At one mine it is the practice to leave up about 6 to 8 inches of top coal.

At the present time there is no mechanical loading (except at Bras d'Or), but a large part of the coal is shovelled, by crews on langwall faces, on conveyors where there is little

opportunity for inspection of the coal as it is being loaded.

The practice of shovelling back the minings (cuttings) on the longwall face so that the shaking conveyors may be installed, results in the minings being thrown toward the gob side and at times considerable fine waste is loaded with the minings.

In certain of the mines, there is falling stone which comes down with the coal and some of the small pieces of this stone are loaded out with the coal. Hand-held drills are used generally and occasionally the roof is shattered by shooting holes which touch or penetrate the roof shale.

Very few clay-veins or gashes were noted in the Cape Breton mines and the mine floor in general is fair, although there are some sections in which it tends to work loose and pieces of it may get into the coal as it is being loaded.

If mechanical loading is employed extensively, there will be a substantial increase in the amount of slate and bone loaded with the coal, partly because of the tendency to sacrifice quality for tonnage (in mechanical loading), and partly because there will gradually be a trend toward sending to the cleaning plant mixed coal and slate that would normally be went to the slate dump or not loaded at all.

Bankhead or Tipple Preparation

Due to the shipping, storage, and marketing practice, the bulk of the coal is shipped from the Cape Breton mines as run-of-mine, slack ($1\frac{1}{2}$ to 2 in.) or screened coal. Hand-picking on the tipples is limited to the $1\frac{1}{2}$ to 2-inch plus size. When there is an excessive amount of shale, splint, or bone in the coal, it is the practice to stop the picking tables until the pickers have cleaned the coal.

Herewith are analyses of coal as shipped, showing the ranges of Ash and Sulphur in the several sizes from the different coal seams:

	<u>Ash</u> <u>Percent</u>		<u>Sulphur</u> <u>Percent</u>	
	<u>Max.</u>	<u>Min.</u>	<u>Max.</u>	<u>Min.</u>
Phalen Seam				
Run-of-Mine	10.87	6.97	5.12	2.27
Slack	10.80	6.83	3.42	2.40
Screened	11.00	5.91	5.35	2.08
Harbour Seam				
Run-of-Mine	6.96	6.05	3.53	2.56
Slack	8.92	5.40	3.29	2.61
Screened	6.46	5.64	3.69	2.53
Emory Seam				
Run-of-Mine	11.13	10.52	2.86	2.55
Slack	11.04	10.46	2.60	2.52
Screened	11.49	10.18	3.05	2.57
Gardiner Seam				
Run-of-Mine	9.42		2.82	
Slack	10.30		2.88	
Screened	8.57		2.75	
All Collieries				
Run-of-Mine	8.05		3.08	
Slack	8.44		2.81	
Screened	7.53		2.89	

No data are available on the total amount of waste picked out at the various tipples. Due to the low tonnages being put over the tipples at the time of the inspections, it was impractical to form an opinion as to the adequacy of the present picking practice. Inspection of loaded railway cars at most of the mines visited showed that the coarse coal as loaded in railroad cars was reasonably free of bone and shale.

At the present time the bulk of the coal is sold for general industrial and railroad uses, with comparatively a small percentage of the total tonnage going to domestic users.

Necessity for Coal Cleaning Plants

The present practice in Cape Breton is to store large quantities of coal reasonably near the mines and also at Montreal. The placing of the coal in storage on the ground following the shipment from the mines in railroad cars, the subsequent loading into railroad cars for shipment to a port for movement by water to Montreal, the unloading and storage at Montreal, and the final loading after screening at Montreal, result in considerable degradation. Under the circumstances, there is

little necessity
for elaborate screening plants at the mines.

The plants erected at the mines have met the needs in the past, but if there is to be any extensive program of mechanical loading, provision will have to be made for washing at least part of the coal at the mines, or at a central cleaning plant.

Several plants have been built in the District for the preparation of Cape Breton coals. A brief statement covering the history of these plants is included in Appendix III.

The present practice of mixing or blending the coal from the various mines has made it possible for occasional batches of poorly-prepared coal to be mixed with coal that is of satisfactory grade, but the introduction daily of a large tonnage of what is definitely known to be dirty coal will result inevitably in customers refusing to take the inferior coal.

It may be asked how much additional ash there will be in mechanically loaded coal from Cape Breton mines and will mechanization pay if it is necessary to wash mechanically-loaded coal. The only way this question can be answered is by practical demonstration, both of the mechanical loading operations and of the mechanical cleaning.

Roof conditions in certain sections of some of the mines are so difficult that some type of mechanical cleaning will be required to make coal from these sections marketable, even though these sections are not mechanized.

Impurities and splits or partings and other irregularities occur in certain seams over part of the Cape Breton Field. Moreover, in the past in underground development, when areas of inferior quality coal have been encountered, such areas have not been mined if it were possible to avoid them. While this may have been the prudent policy in the past, in the long run, after areas have been opened up by underground development, it should be possible to mine those areas of below-grade coal and send the coal to a cleaning plant so that it may be made marketable. Hand-picking of such coal is expensive and inefficient.

Mechanical cleaning may be of great importance in the development of coal seams that may be found, above and below the main workable seams, as the mines are extended into deep submarine areas. If deep shafts and cross-measure tunnels are projected, it will be most important to make the largest possible tonnage available for mining through these deeper workings.

Finally, mass production methods employed underground must be matched by equally efficient mass production methods on the surface, if mining in the Cape Breton Field is to be maintained on a competitive basis.

Experience of Other Coal Fields

In the marketing of Cape Breton coal, as has been stated, comparisons are being made continually with the coal from the Fairmont Field. Reference has been made to the extent of mechanical loading in the Fairmont Field. There are six cleaning plants handling coal from mines in the Pittsburgh Seam and two additional plants cleaning coal from the Sewickley Seam.

In the Fairmont District, the Pittsburgh Seam averages about 8 feet thick and the top 12 inches of coal being usually of inferior grade is left as roof. This coal makes a very good roof and serves to keep the overlying shale from contaminating the coal. The Sewickley Seam is 5 to 6 feet thick and generally has a good roof, so that very little roof slate gets into the coal when loaded mechanically.

The mechanically loaded coal from the Pittsburgh seam contains probably 3 per cent more ash than hand-loaded coal. The practice is to by-pass the minus 3/8-inch coal, to hand-pick the plus 5-inch, and to wash the remainder. The cleaning operation reduces the overall ash about 3 per cent.

The coal from the Sewickley Seam when mechanically loaded carried 13 to 14 per cent ash. The minus 3/8-inch is by-passed and the cleaning plants reduce the overall ash content by about 3 per cent.

All the mechanized mines in the Fairmont District do not have cleaning plants and this is due largely to the good roof conditions prevailing there.

In Western Pennsylvania, with a greater variety of mining conditions and possibly more exacting requirements for the coal marketed, there are many more cleaning plants and practically all of the mines employing mechanical loading send their coal to cleaning plants. In some cases, the cleaning plants are located at the mine mouth and in other instances, the coal is hauled by rail or water a considerable distance to the cleaning plant which may serve several mines.

There are twenty cleaning plants in Western Pennsylvania receiving coal from thirty-seven mines. Several additional large cleaning plants will be built within the next two years in order to improve the quality of metallurgical, industrial, and domestic coal.

In general the roof and seam conditions are not so favorable in Western Pennsylvania as they are in the Fairmont Field. In much of Western Pennsylvania there is slate roof; there are binders in the Pittsburgh Seam; and there is bony in the Freeport Seam. When a Western Pennsylvania mine is mechanized, it is generally necessary to use mechanical cleaning.

In a number of the mines of Western Pennsylvania, mechanically-loaded run-of-mine contains 7 to 17 per cent refuse. At one of the largest plants the minus 4-inch is washed, the plus 4-inch is hand-picked. The refuse amounts to 17 per cent. At a number of the plants the fine coal is not washed and therefore the percentage of discard is reduced.

One of the chief objections to washing coal is the increase in the moisture content of the product. At some Western Pennsylvania cleaning plants, where the washed coal is not dried, the moisture content increases about 3 per cent on 3/4 by 4-inch coal and 4 per cent on 3/8 by 4-inch coal.

The objection to the moisture content of washed coal from

the Cape Breton field has been discussed and, undoubtedly, this subject will have to be given very careful consideration. The same problem exists at other mines located where there are severe winters, or where washed coal is shipped to customers in the North.

General

In the discussion of Long-Range Planning and the statement of a Suggested Mechanization Program, presented later in this report, various references are made to coal preparation and a program for mechanical cleaning. In order to coordinate these suggestions as to (1) the study of the quality of mechanically-loaded coal, (2) the construction of a pilot cleaning plant, and (3) the ultimate plans for coal preparation, the essential points are presented at this time, as follows:

1. Study the quality of the coal produced by mechanized mining (in the mines selected for tests of mechanization) and determine the character of mechanical cleaning required. Such a plant would determine whether mechanically loaded coal could be prepared satisfactorily and economically for competitive markets.

2. If mechanical cleaning is to be inaugurated, a central cleaning plant should be built with sufficient capacity to take the entire tonnage of the mechanized mines.

3. While the future of the district appears to lie in the efficient and economical operation of central plants serving the high-grade coal seams which are now producing a marketable product, extensive large-scale tests should be made on the lower-grade coal from seams not now being mined. Such tests should determine whether these seams can produce a quality of coal, after washing, that will be of high enough grade to mix with the coal produced from the higher-grade seams.

In conclusion, it is my opinion that much more attention will have to be paid to coal preparation, even though mechanical loading is not installed extensively. As noted previously, this will be required on account of,

1. Poor roof conditions in certain areas where the coal is of good quality.
2. Competition will probably be severe as more superior quality coal becomes available in markets now supplied from Cape Breton mines.

S E C T I O N I X

LONG-RANGE PLANNING

Reference has been made in this report to the periods and stages in the development of submarine areas. The future programs of the Dominion Coal Company and of the Old Sydney Collieries have given consideration to the allocation of coal reserves, the extension of haulage roads, the most favorable location of hoisting shafts and air shafts, and the extension of power facilities to serve most efficiently the areas in which mining is now being carried on. Exhibit 18 shows the areas allotted to each colliery. In assigning the areas and tonnages, several general principles have been followed; particular attention having been given to the length of the frontage assigned to each submarine operation,- these frontages ranging from 3 miles to $4\frac{1}{4}$ miles. The combined sea frontage in five blocks thus allocated is $16\frac{1}{2}$ miles, and there remains unassigned in the submarine area a comparatively small area northeast of the present Florence workings and an unexplored area extending from Mine No. 6 toward Capé Morien.

Any sound planning for future mining, having in mind particularly the selection of sites for future deep shafts and long-life mines of much larger capacity, must take into account the major folding of the coal measures which has created basins in the coal seams as they dip seaward. These basins have been called:

Sydney Mines Basin

Lingan Basin

Glacc Bay Basin

Morion Basin

If only the largest of the present mines are to be continued in service and a few new ones are to be opened to serve the submarine area, the most favorable and strategic sites must be selected so that coal lying in the above basins may be reached, as well as the coal on the folds between the basins. Such underground development to be most economical must provide haulage roads that can be constructed and maintained at least expense, that give access to the largest possible proportion of the coal reserves in the several workable beds, and at the same time give the shortest and easiest hauls to the central mine shafts for the area.

It may be possible to select one or more such strategic points from which cross-measure tunnels may be driven to reach the flanks of the folds or the adjacent basins, thus reducing greatly the cost of shafts and avoiding the duplication of surface plants and service equipment.

Present mining has reached 2300 feet at one point, 2150 feet at another, and from 1700 to 2000 feet at many points. (That is vertical depth). In estimating the total coal reserves, the maximum depth considered workable has been set at 4000 feet. Eventually economic mining may be extended to greater depths. It might be advisable to sink vertical shafts to 3000 feet and drive level cross-measure tunnels to intersect the workable coal seams. After the coal above the 3000-foot level had been exhausted, it might be desirable to sink the shafts down to 4000 feet and drive additional tunnels at the 4000-foot level.

Recently mechanical loading devices have been used in vertical shafts and substantial improvement has been made in shaft-sinking methods, so that we may look forward to a reduction in the cost of sinking shafts. There have also been reductions

in the cost of driving rock tunnels. The cost of doing such expensive development work in rock can probably be justified due to the large savings that can be effected by the use of large mine cars, high-speed haulage in cross-measure tunnels, and hoisting with large skips, to the most modern surface plants. Cars of more than 10 tons capacity are being hauled at more than 20 miles per hour in great trains by most modern locomotives, underground.

There is a real opportunity for cutting costs by reducing the amount of hoisting on slopes (which includes the lifting of the mine cars) and substituting haulage on the level, followed by vertical hoisting. After the shafts and tunnels have been built, the operating cost can be maintained at a low level for a long period of years.

It should be noted also that after the cross-measure tunnels have reached the several seams, haulage roads may be driven in the coal seams and may be used effectively for much greater distances than the 1.5 to 2 miles now projected in the areas allocated.

If two large mines are planned, these might have a sea frontage of 10 miles each, while if the field is divided into three sections, the frontages would be for one shaft about 5.5 miles and for the other two 8.5 and 8.0 miles respectively.

In addition to the savings possible by high-speed haulage and concentrated hoisting, additional savings are possible by the modernization and concentration of surface plants. Under the present arrangements, large forces of men are required at some of the mines to handle a relatively small tonnage. Reconstruction of the plants referred to is not warranted unless substantial increases are made in the tonnage handled per shift; double-shifting of both inside and outside operations should be the standard practice when such improvements have been completed.

S E C T I O N XSUGGESTED MECHANIZATION PROGRAM

1. Try mechanical loading in several of the smaller room-and-pillar mines where the pitch is favorable. (Suggestions previously made for Mines No. 25, No. 24, No. 4, No. 20, and Princess).
2. Where the results are satisfactory, mechanize these mines completely as promptly as possible.
3. Study the roof conditions, etc., and develop the best practice for working the same seams on steeper pitches by room-and-pillar methods, using the most suitable mechanical loading devices available.
4. Study the quality of the coal and, if necessary, design and install a pilot cleaning plant (to be followed later by units of one or more central cleaning plants to take coal from the mechanized longwall workings, as well as the room-and-pillar mechanized sections).
5. Install in a small mine where seam conditions are favorable, one type of longwall loading machine such as is being used in Britain. Test this thoroughly and, if necessary, have a loading machine designed to suit Cape Breton seam conditions.
6. If a longwall loading machine is found practical, make a survey of pitch of seam, roof, and floor conditions in both the Harbour and Phalen Seams, and determine the extent to which this type of equipment, or other equipment that may become available, will be applicable in the submarine areas now developed or accessible from present deeps, cross-measure tunnels, etc. By this survey, it should be possible to determine the extent to which mechanical loading may be applied economically to the submarine areas, and the proportion of the total tonnage in these two seams (as now developed) that is not suitable for mechanical loading.

Serious consideration will have to be given to those portions of mines to be mechanized which on account of pitch,

roof conditions, etc., may not be suitable for mechanical loading, for it has been the experience in other fields that it is very difficult to succeed with mechanical loading unless the entire mine is completely mechanized.

7. From the data secured from the suggested pilot cleaning-plant, and the tonnages that will be produced by mechanical loading, estimates can be made of the overall capacity, type, and strategic location of central cleaning plants necessary on account of mechanical loading.

8. After such studies have been made to determine the best methods of mining and cleaning the product from mechanized mining, a complete economic study will be necessary to consider the long-range financial situation to determine

(a) whether it will be sound business to make additional expenditures for mine plants, machinery, cleaning plants, and for the mine development required to extend the mines to greater distances and depths in the submarine areas,

(b) if submarine mining is not to be extended beyond the depths and distances now developed, whether the inferior seams, which heretofore have not been marketable, shall be mined and marketed where limited tonnage of such low-quality coals can be sold, or

(c) whether the future mining operations shall be limited to the present mines and the coal areas now developed or accessible from these mines.

I shall now set out in detail the logical stages in such a comprehensive Program, at the same time indicating the sequence of those stages.

PERIOD NO. 1

FIRST STAGE in the Proposed Cape Breton Mechanization Program

Step No. 1

Negotiate an agreement with the United Mine Workers of America, covering day rates for all types of mechanized mining and following the fundamental principles as to wage structure which have proved satisfactory in the United States. This is

most essential and no subsequent Step should be undertaken until an agreement has been made that will be broad enough to cover all phases of face mechanization.

Step No. 2

Completely mechanize one or more small mines where seam and working conditions are favorable. Train officials and men most thoroughly for this type of work. Establish highest standards as to safety of men, maintenance of equipment, and continuity of production on a multiple-shift basis.

Step No. 3

Organize within the Engineering Department (of the Dominion Coal Company) a Production Engineering Division which will

(a) plan the mechanization program at each mine, prepare detailed plans and instructions,

(b) keep records of performance and costs,

(c) in conjunction with the Safety Department and District Superintendent, establish safety standards relating to the use of new machines and new practices,

(d) determine standards for preparing the working places so that coal may be loaded readily with a minimum of small sizes and the least amount of slate, felling-stone, etc., and

(3) formulate a system of simple records that will form the basis for determining whether mechanization pays or can be made to pay.

Step No. 4

Study the quality of the coal produced by mechanized mining and determine the character of mechanical cleaning required.

Step No. 5

Install in a small mine, under favorable seam conditions, some type of proven longwall loading-machine, such as is being used in Britain and give it a thorough test.

PERIOD NO. 2Second Stage in the Proposed Cape Breton Mechanization Program

If the mechanical loading in (1) room-and-pillar mining and (2) longwall mining is successful, and (3) after the facts as to the necessity for mechanical cleaning have been determined - all possibly within a period of one year after the underground installation has been made - it is suggested that the following steps be taken:

1. The mines in which experimental units have been installed should be mechanized completely, that is to say additional units should be installed and all the services such as power, ventilation, and haulage, should be provided for such change in practice.

2. If mechanical cleaning is to be inaugurated, a central cleaning plant should be built with sufficient capacity to take the entire tonnage of the mechanized mines.

5. Simultaneously, there should be a careful study made to determine what should be done to secure lower costs generally for underground haulage, hoisting to the surface, dumping, and other surface operations.

Complete mechanization should be given consideration first at those mines (seam and roof conditions being equally favorable) where haulage and other costs can be reduced to a level that may be considered satisfactory, but improvements in haulage at other mines should not wait for complete mechanization, if substantial improvement in production per man shift and reduction in costs can be secured by rehabilitation of underground haulage. These should be undertaken as one of the essentials in Period No. 2. Among these suggestions are the following:

1. Increased capacity of mine cars, possibly the installation of drop-bottom cars of the largest size practical for the established gauges and clearances.

2. The introduction of trolley locomotives, storage battery locomotives, combination trolley-and-battery

locomotives, or Diesel locomotives.

3. the installation of improved facilities for hauling men to and from the working face.

4. Other improvements, both surface and underground, that would take full advantage of the speeding up of underground haulage, large cars, etc., in mines that may not be mechanized at an early date, as well as those that are in the process of being mechanized completely.

PERIOD NO. 3

Third Stage in the Proposed Cape Breton Mechanization Program

If after the efficiency and economy of the several steps outlined in Period No. 1 and Period No. 2 have been determined, and the results attained justify it, the next logical step is to determine the best plan for submarine mining at increased depth and greater distance from the shore line.

As noted elsewhere, this may be compared to the "Fourth Period" of the Dominion Coal Company's Chief Engineer's description of the life of a submarine mine, namely, the time when it may be advisable to sink deep shafts, drive cross-measure tunnels to reach the coal seams. (See Exhibit 15, page 18).

In the Report of the Technical Advisory Committee of the British Ministry of Fuel and Power, considerable attention is given to the methods used in developing the Dutch and German mines. In the Dutch mines, pairs of "stone drifts" are driven from vertical shafts to intersect the several coal seams with a vertical interval of 450 feet between levels. The slope of the coal seams is 1 in $4\frac{1}{2}$. (See Report of the Technical Advisory Committee, page 20).

The British are giving serious consideration to the construction of several deep mines to reach dipping seams at depths comparable to those prevailing in the submarine areas of Cape Breton.

The study of this problem in Cape Breton will need to be most thorough and include the most efficient methods of sinking

large shafts, driving large-size tunnels and handling and disposing of the rock produced, equipment for high-speed, long-distance underground haulage, and ventilation of the extensive openings that would be required for such a gigantic undertaking.

In the "Estimated Reserves of Coal of Good Quality" submitted to the Commission, there is included as "Reserve for New Colliery" a total of 93,400,000 tons in the Phalen and Harbour Seams. This reserve is in the Lingan Area and would be a most suitable location for such a large-size mine, deep shafts, etc.

It is recognized that such an undertaking would require a great expenditure of capital and it is important that all the engineering features of this type of mine be studied most thoroughly. The underground haulage and hoisting problems will have to be faced soon. Mechanical loading is important but mechanical loading will not overcome the mounting costs due to more costly haulage and hoisting.

It would take the continuous work of a skilled staff working several years to develop the engineering data necessary to determine whether the construction of such a large undertaking with a large-size cleaning plant would be warranted.

If funds are available for such a mine, it would take several years to bring it into full production.

SECTION XI

SUMMARY

After inspecting a number of the Cape Breton coal mines, conferring with numerous parties connected with the coal mining industry, and reviewing a large number of pertinent submissions and reports, the following points are presented as summarizing the conclusions reached:

1. Coal Resources. There is a large area and tonnage of high-grade submarine coal remaining, as well as a large area and tonnage of lower-grade coal, both land and submarine.

2. Present Coal Development. Of the Dominion Coal Company production, 88.6 per cent is submarine and all of the Old Sydney operations are submarine. With adequate labor supply, the Dominion Coal Company mines, as now equipped, can produce 18,500 tons per day on a five-day week.

3. Labor Supply. There has been a shortage of about 600 producers and the availability of additional producers in the past-war period is uncertain. However, prior to the war there was an abundant supply of mine labor.

4. Declining Productivity. The output per man employed has been falling due to a number of causes for which remedies are not readily available. The statistics for the period since 1939 follow:

DOMINION COAL COMPANY

Tons Production per Man per Day

<u>Colliery</u>	<u>1939</u>	<u>1940</u>	<u>1941</u>	<u>1942</u>	<u>1943</u>	<u>1944</u>	<u>June 1945</u>
No. 1B	2.63	2.48	1.92	1.99	1.88	1.48	1.40
No. 2	2.33	2.18	1.81	1.74	1.46	1.33	1.29
No. 4	3.32	3.23	2.75	2.80	2.39	2.02	2.03
No. 11	1.76	1.76	1.60	1.60	1.18	1.00	1.02
No. 12	2.49	2.51	2.15	2.24	1.63	1.50	1.54
No. 16	2.21	2.19	1.89	1.81	1.47	1.56	1.68
No. 18	2.40	2.28	2.27	2.15	1.63	1.32	1.48
No. 20	3.25	2.96	2.04	2.05	1.59	1.54	1.52
No. 24	2.20	2.13	1.90	1.92	1.78	1.61	1.73
No. 25				1.63	1.52	1.36	1.74
No. 26						1.88	1.17
Total	2.41	2.37	1.97	2.02	1.68	1.52	1.50

With the close of the War, there should be some improvement for the time, partly due to the return of men from the armed forces and partly due to the anticipated improvement in balance between producers and day force. It may be assumed that Saturday work will be discontinued and this should result in some improvement in the production per man-day.

5. Increasing Production Costs. Increasing depth and longer hauls indicate the inevitability of further increase in production costs, if facilities and mining practices are not improved substantially.

6. Future of Field. Assuming pre-war markets and a quality of coal produced at least equal to the pre-war product, the future of the field depends on increased output per man employed.

7. Pilot Mines and Plants. The economic future of the district, on a strictly competitive commercial basis, cannot be forecast until thorough and complete operating demonstrations have been made, by means of pilot mines and plants, to determine the output per man and the quality of the product that can be obtained by new mining machinery, revised mining methods, and mechanical preparation of mechanically loaded coal.

The data secured from the operation of such pilot mines and plants can be used as a basis to determine

a. Whether the suggested underground equipment can be used safely and economically in the greater portion of the proved submarine field.

b. The tonnage per man that can be produced by these new methods and machines in the field generally.

c. Whether the coal produced can be prepared satisfactorily and economically for competitive markets.

8. Engineering Studies. In conjunction with the construction and operation of the proposed pilot mines and plants, there should be undertaken in great detail engineering studies and estimates of the construction costs of deep shafts and cross-measure tunnels to reach to the full depth and distance now considered as the possible limits of economic mining operations. These studies should be based on the latest Canadian, United States, and European practice in shaft sinking, tunneling, and mine development, and should determine the total approximate cost of a modern central mine plant to reach and serve, in the most economical manner, a large portion of the submarine area now considered mineable. Included in the suggested Program in Period No. 3 is reference to the reserve Lingan Area, comprising over 90,000,000 tons of coal. Studies of the engineering problems of opening a mine in this area

would include estimates of the operating efficiency of such deep shafts, tunnels, etc.

9. Economy of Central Plants. With these studies as a basis and considering the long-range program for both production and marketing, some fundamental estimates can then be made as to

- a. Overall capital cost,
- b. Capital cost per annual ton of production of clean coal,
- c. Necessary depreciation rates to write off the proposed plant, and
- d. The net operating result for that portion of the field that will be mined from the proposed central mine and plant.

10. Future in High-Grade Seams. The future of the district appears to lie in the efficient and economical operation of such central plants operating upon the high-grade coal seams which are now producing a marketable product, rather than in opening new mines in the poorer grade seams remaining unmined. Extensive large-scale tests to determine the washability of these latter coals should be made before any extensive expenditures are incurred in the development of such coal seams by separate mining operations.

11. Engineering, Management, Cooperation with Labor. The natural physical handicaps of the Cape Breton coal fields - namely, a quality of coal that is not as good as many of the competing coals from the United States and the difficulties of mining in the submarine areas - will require most skilful engineering and efficient management working in cooperation with labor that is willing to match the United States miner in hours spent working at the face with efficient tools and equipment.

BY MR. FRAWLEY: Now, Dr. Young, these appendices are exclusively compilations of data?

DR. YOUNG: Primarily, yes.

Q They don't contain any observations?

A Now just a minute, please. Appendix II, page 107. This material represents material which I picked up and comments on things which I saw as to the several mines. It is primarily ---

Q Setting down information?

A That's right.

Q No recommendations? Nothing by way of comment for betterment?

A I think not, in this part.

Q And that can be said generally of all the appendices?

A Yes sir.

BY MR. FRAWLEY: I would suggest, Mr. chairman, that the appendices be taken as read; be put into the transcript, of course, but not read by Dr. Young. The interested parties can examine Dr. Young on any part of it, of course.

BY MR. COHEN: Might I ask Dr. Young if there are any recommendations implied in any of the statements that appear in the appendices?

DR. YOUNG: You had better give me till after lunch to look through and refresh my memory.

BY MR. FRAWLEY: And you could pick out any such passages and bring them to our attention. I think Dr. Young should complete his whole presentation. You have another report which has to do with the Nova Scotia mines, other than Dominion Coal?

DR. YOUNG: Yes.

Exhibit 203 - Report of Dr. L. E. Young on
Nova Scotia Mines - Part II

EXHIBIT 202 - APPENDIX ICOAL RESOURCES

The coal measures are of carboniferous age underlain by Cambrian shales and sandstones, the common contact with which defines the productive measures to the south and east while on the north-west they terminated along a fault plane, the result of an upthrow of syenitic hills. (Exhibit No. 15. Physical Conditions and Development of the Sydney Coal Field, by T. L. McCall, General Manager, Dominion Coal Company).

Folding has resulted in the formation of four basins, the axes of which are parallel in an east-west direction. These four basins are referred to as the Sydney Mines Basin (on the west), the Lingan Basin, the Glace Bay Basin, and the Morien Basin. The field dips to the north-east under the sea at about 7 per cent through gradients as heavy as 38 per cent are worked on the anticlinal limbs. The field is remarkably free from faults or dislocations.

Present development has reached 3 3/4 miles off shore in places and has proven a submarine area of 100 square miles of which a considerable part has already been worked in one or more seams.

Below are listed the seams in the several basins, in descending order. Those immediately above and below the horizontal line can definitely be correlated, but there is still a little uncertainty as to correlating some of the others.

<u>Morien Basin</u>	<u>Glace Bay Basin</u>	<u>Lingan Basin</u>	<u>Sydney Mines</u>
			Cranberry
			Head 3' 7"
			Strata 250'
			Lloyd
			Cove 3' 9"
			Strata 270'
	Hub 4' 7"	Barrasois	Chapel
	Strata 375'	5' 0"	Point 3' 9"
		Strata 380'	Strata 320'
Blockhouse 8' 0"	Harbour 5' 8"	Victoria 6' 6"	Main
			Scam 4' 10"

<u>Morien Basin</u>	<u>Glace Bay Basin</u>	<u>Lingan Basin</u>	<u>Sydney Mines Basin</u>
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Strata 570'	Strata 250'	Strata 235'	Strata 430'
Gowrie 5' 0"	Boutilier 3' 9"	Fairy-house 3' 0"	Indian Cove 3' 6"
Strata 210'	Strata 90'	Strata 75'	Strata 215'
Spencer 3' 6"	Backpit 3' 0"	Northern Head 4' 0"	Collins 3' 0"
Strata 340'	Strata 112'	Strata 75'	
Long Beach 3' 0"	Phalen 7'	Lingan 5' 6"	
Strata 650'	Strata 130'	Strata 900'	
Coal Brook 3' 6"	Emery 3' 6"	Mullins 5'	
Strata 600'	Strata 425'		
Tracey 5'	Gardiner 4' 3"		
	Strata 475'		
	Mullins 4' 6"		
	Strata 1600'		
	Tracey 5' 0"		

The productive measures are made up of:

Coal	2 per cent
Shale	60 per cent
Fire Clays	15 per cent
Sandstone	23 per cent

Generally, the roof is a weak shale, but in a few localities of small extent it is sandstone. The pavement varies from a soft fire-clay to hard shale.

The coal is bituminous. The seams vary in quality and, as presently mined, an analysis typical of the Company's product is:

Volatime Matter	33 - 35 per cent
Fixed carbon	55 - 57 per cent
Ash	8 - 10 per cent
Sulphur	2 - 3 per cent
Fusion temperature of ash	2100° F.
B.t.u.	13800 - 14200

At present the bulk of the coal mined is from the Phalen and Harbour Seams but there is one mine in the Gardiner Seam and two mines in the Emery Seam. Only one seam, the Harbour, of 5 feet to 6 feet in thickness, is continuous and workable as to quality and height through the whole field. Three collieries operate on it today, the output of which is drawn entirely from submarine areas, all land coal in this seam having been mined. About 13 square miles of the seam has already been worked over.

The Phelan Seam, averaging 5 feet 6 inches to 7 feet 6 inches, and lying 450 feet below the Harbour, is the seam which has been most extensively worked, the area mined out amounting to

33 square miles. With the exception of one small mine working the only land area still intact, all operations of the remaining four collieries located on this seam are entirely submarine. This seam is workable throughout the field except in that area comprising the western third, where it has split into a number of thin leaves separated by partings up to 45 feet wide.

Underlying the Phelan Seam by an interval of 130 to 160 feet is a 3-foot seam known as the Emery, occurring in workable height over the central and eastern portions of the field, but unfortunately it becomes too thin to work to the dip of the shore line as it also has done to the west. One submarine and one land colliery operate on this seam, of which $10\frac{1}{2}$ square miles has been worked out.

The Gardiner is a seam of varying height and quality lying 425 feet below the Emery. Over only a comparatively small section in the center of the field is this seam of present value and No. 25 Mine has been developed on it lately.

These are the four seams in which major operations are being carried on today. Two others, the Hub, of 4 feet 7 inches and at 375 feet above the Harbour, and the Lloyd's Cove, 3 feet 9 inches in thickness and lying 275 feet above the Hub, have worked to a small extent in the past.

COAL RESERVES OF GOOD QUALITY

DOMINION COAL COMPANY

The only reserves of high quality coal available to the Dominion Coal Company Limited are those remaining in the submarine areas seawards of the present workings, the single exception being the area at Lingan which is being held for a new colliery when such is required.

Four thousand feet has been assumed to be the maximum depth of cover under which mining can be carried on, and the maximum distance that the workings can be carried seaward has been taken at 5 miles.

Attached is a statement giving an estimate of the possible

recoverable tonnage of coal under the above conditions, together with the corresponding expectancy of life of these mines. In making these estimates it has been necessary to assume that the coal seams maintain their present characteristics for the distances indicated. So far no changes whatsoever have taken place in the distances covered. Thin seams of coal or seams yielding coals of greatly inferior quality have not been included, such as the Back Pit or Boutilier Seams, to mention two of the seams most persistent over the area.

The total estimated tonnages of high grade coal shown in the statement is 402,000,000 tons, which would keep these collieries going for another 90 years at an annual output of 4,500,000 tons.

Other Coal Reserves

The yield from the Gardiner Seam has not been included in the above for the reason that although the coal from this seam is at present of moderately good quality, test boreholes have shown that this quality deteriorates away from the present opening.

The above estimated tonnage of reserves must not be confused with other figures dealing with coal reserves as the estimates given in this memorandum refer to what might be classed as developed reserves. There are other areas, however, which have not been included in arriving at the above figure for the reason that the quality of the coal is very definitely inferior to what is now being mined. Again there are still other areas, now inaccessible, that may or may not contain seams of coal worth working.

A good example of this latter condition is the extension of the Harbour Seam and Phelan Seam east of No. 4 Colliery and as far as the anticline at Cape Percy, where the outcrops of both seams leave the land area at Donkin and plunge under the ocean and no one has as yet been ingenious enough to devise a method of prospecting such areas.

A combination of the above two conditions, i.e., inferior quality and inaccessibility, is found in the Morien-Birch Grove

district, and as a good deal of publicity has been given at different times to the opening of new mines in this area, the following information is supplied to dispel any false ideas that may be abroad.

Morien-Birch Grove Area

The productive measures in this district are contained in a narrow synclinal fold running in an east and west direction. The axis of this syncline dips gently to the east where it enters the submarine area at Cow Bay. The measures are highly inclined on the northern flank of the syncline but on the southern flank return to the surface on a gentle gradient.

Section

The seams in this area as proved by boreholes or otherwise are:

	<u>Ft.</u>	<u>In.</u>		<u>Ft.</u>	<u>In.</u>
Blockhouse Seam	9	0		570	0
Strata					
Gowrie Seam	5	7 to	4' 10"	250	0
Strata					
Three Foot Dirty Seam	3	0		100	0
Strata					
Spencer Seam	2	10		85	0
Strata					
Four Foot Dirty Seam	4	0		215	0
Strata					
Long Beach Seam	1	10			

Blockhouse Seam

This seam yielded an excellent quality of coal but only a small area underlay the land area and this has been completely worked out. The seam where it dips under the sea is lying under too shallow cover to permit of its being worked, but should the axis of the aforementioned fold continue to dip in the submarine area as it had done in the land area, and should the seam continue to hold its height and quality, then the minimum depth of solid cover over the Blockhouse Seam at which mining could begin could not be reached under a distance of 2 miles off-shore. In the course of the next mile seawards there might be 1,250,000 tons of coal that could be worked.

At present there is no known method of determining the depth of cover, or quality of coal of this remote seaward area.

That is one problem which if it could be solved would be followed by the second problem of the very large expenditure involved in shaft sinking on the land area and driving tunnels to intercept this seam at the assumed point some 2 miles out to sea.

Gowrie Seam

This seam has been worked by the following collieries, naming them in their order from west to east,

Dominion No. 21
 Dominion No. 22
 Old Gowrie Mine
 North Atlantic Collieries

Nos. 21 and 22 Collieries have completely worked out all the coal between the two outcrops, but to the north of the old Gowrie workings and in the neighborhood of the Atlantic Collieries it is estimated that there may be some 3,500,000 tons of recoverable coal in the land areas. The seams on the northern flank of the syncline are highly inclined and pitch up to 43° and most of the above tonnage lies in the northern flank. Such steep inclinations require changes from customary district practice in the recovery of coal.

In the North Atlantic Collieries, it is estimated there might be possibly 7,000,000 tons of coal to be worked. In these areas the height of the seam has declined from 5 feet 10 inches as mined in No. 22 Colliery, to 4 feet 10 inches, and this latter height includes a clay band of 6 inches in thickness which made its appearance in the seam about 2 feet above the pavement.

Similarly, the ash and sulphur contents in No. 22 Colliery were 8.6 per cent and 3.06 per cent respectively. The average analysis of several samples taken from Atlantic Collieries are shown below, and can be compared with the average analysis of the present Dominion output.

	<u>Gowrie Seam</u>		<u>Average Dominion</u>
	<u>No. 22</u>	<u>North Atlantic</u>	
Fixed carbon	55.61	53.64	57.0
Volatile matter	35.79	34.76	35.0
Ash	8.60	11.60	8.0
Sulphur	3.06	6.13	3.0

Spencer Seam

The only seam below the Gowrie which shows any sign of promise is the Spencer Seam. This seam has never been worked, but has been prospected by means of boreholes, proving approximately 13,000,000 tons of workable coal. The average height of the seam was shown to be 2 feet 10 inches, the coal having an average analysis of

Fixed carbon	52.94 per cent
Volatile matter	37.33 per cent
Sulphur	4.37 per cent
Ash	9.73 per cent

This seam would appear to yield a better class of coal than the Gowrie Seam, but the thinness of the seam is a serious factor when considering it as a commercial proposition.

Mullins Seam

In the Glace Bay district deep boreholes probing the structure of the field found the Mullins Seam horizon consisted of thin streaks of dirty coal.

This seam underlies the Phelan Seam by an interval of some 900 feet and is the lowest known seam of the Glace Bay - New Waterford district. The outcrop of the seam reaches its maximum development in the New Waterford district. Nothing is known about the behaviour of this seam at depth.

West of New Victoria the outcrop of the seam submerges and its next appearance on land is at North Sydney on the opposite side of the harbour.

The Candy Pit at North Sydney was sunk in 1928 to work this seam, but after a short career during which only 48,000 tons were mined, the colliery closed down and has not been reopened.

The height of the seam proved to be 5 feet 7 inches, including a clay band 5 inches in thickness. Other clay bands also occurred irregularly in the seam. The product from this mine was unquestionably of low grade.

The information obtained by prospecting the outcrop of the seam near New Waterford plainly showed that out of the 7 feet making up the height of the seam, some 5 feet might be mined

to yield a coal having an ash content of not less than 11 per cent. The sulphur content would be at least 6 per cent and the heat value approximately 13,000 B.t.u. The samples from which the above results were obtained were taken from near the outcrop but sufficiently far away from the weathered coal at the crop to be truly representative of what the seam would yield. As already stated, nothing is known of the behaviour of this seam at depth, but at the same time one may venture to predict with a very reasonable degree of accuracy that this seam should show a fairly rapid further deterioration from its present quality as it is followed to depth.

NOVA SCOTIA STEEL & COAL COMPANY

This company holds coal leases on the north side of the Harbour and has sub-leased a certain number of them to Old Sydney Collieries who operate Princess and Florence Collieries.

The reserves of coal for Princess and Florence lie in the Harbour Seam in advance of the present workings. This seam is continuous under Sydney Harbour and is the only one of the seams of the Sydney coal field worked in the Glace Bay and New Waterford areas that does not split up or disappear as a recognizable seam after proceeding westwards under Sydney Harbour. The Harbour Seam becomes of diminished height proceeding north-westerly. This tendency of the seam to thin forms an unknown boundary to the workings of Florence Colliery, which to date tends to curve across the main deep of Florence Colliery. There are no means of determining along what line of boundary the Harbour Seam may thin except by persisting with development so long as the seam is workable. This is what is being done.

Projecting a boundary for the thinning of the Harbour Seam and estimating the seaward gradients of the strata, from all available data, it is then assumed that provided the Harbour Seam maintains its thickness and quality as far as the 5 mile off-shore limit, there are 42,000,000 tons of recoverable coal that would provide for the continuation of the present output

for another 65 years.

Other Reserves

There are other reserves of coal, but as the crops occur moderately close to the shore limit and the seams dip under the ocean the continuance at depth is at present an unknown quantity.

The Hub Seam which contains reserves of good quality coal on the south side of the Harbour is represented at Cranberry Head near Princess Colliery by a series of thin seams, at least eleven in number. Boring upwards from the Harbour Seam has shown this split-up condition of the seam as persisting in submarine areas to a point 12,000 feet north east of Cranberry Head.

It is believed that the splits of Hub Seam come together in the Boularderie Island area as the Stubbart Seam. There may be a substantial reserve of submarine coal in this vicinity, but nothing is known of the nature of the Stubbart Seam as it proceeds seaward from its outcropping across the tip of Boularderie Island.

Two seams are known to be present above the Stubbart Seam (Hub) namely, Lloyd's Cove or Bonar Seam and Point Aconi Seam. This latest named seam has only a fragmentary outcropping (now denuded) at the tip of Point Aconi. It can be ignored as a source of mineable coal at this time as really nothing is known of its submarine extent or nature.

The Lloyd's Cove Seam (which is present on Point Aconi as two seams of inferior quality) has been mined intermittently since 1870, but its quality has not been sufficiently good to enable it to be marketed along with Harbour Seam coal.

The seam has been worked by the No. 2 Colliery of the Nova Scotia Steel and Coal Company, which after a checkered career of openings and closings was finally closed in 1915. It was also worked at Bonar Head, work there being discontinued in 1923.

ESTIMATED RESERVES OF COAL OF GOOD QUALITY

Don. Coal Co. Ltd.

Cape Breton

Mines

<u>Colliery</u>	<u>Seam</u> <u>Seam</u>	<u>Seam Height</u>		<u>Recoverable Coal</u> <u>(Long Tons)</u> <u>Seam</u>	<u>Recoverable Coal</u> <u>(Long Tons)</u> <u>Colliery</u> <u>Total</u>	<u>Years</u> <u>Estimated</u> <u>Life of</u> <u>Colliery</u>
		<u>Ft.</u>	<u>In.</u>			
No. 1B	Phalen	7	0	47,000,000		
	Harbor	6	0	53,000,000		
	Hub	4	6	33,000,000	133,000,000	165
No. 2	Phalen	7	0	1,000,000	1,000,000	6
No. 4	Phalen	6	0	37,500,000	37,500,000	94
No. 11	Emery	3	0	600,000	600,000	4
No. 12	Harbor	5	0	30,000,000	30,000,000	60
No. 16	Phalen	5	0	15,500,000	15,500,000	30
No. 18	Phalen	5	0	1,000,000		
	Harbor	5	0	6,500,000	7,500,000	31
No. 20	Harbor	6	0	50,000,000		
	Hub	4	6	30,000,000	80,000,000	109
No. 24	Emery	3	0	4,300,000	4,300,000	16
Reserve for Phalen		6	0	50,800,000		
New Colliery Harbor		6	0	42,600,000	93,400,000	154
Total				402,800,000	402,800,000	90
No. 25	Gardiner	4	0	3,500,000	3,500,000	25
	(Inferior Grade)					

N.S. Steel & Coal Co.

Old Sydney Collieries

Princess Harbor	5	0	33,750,000	33,750,000	84
Florence Harbor	4	0	8,500,000	8,500,000	34
Total			42,250,000	42,250,000	52

DOMINION COAL COMPANY LIMITEDAnalyses of Coal Seams
Glace Bay DistrictSeams not worked at present time

<u>Seam</u>	<u>Fixed Carbon</u>	<u>Volatile Matter</u>	<u>Sulphur</u>	<u>Ash</u>
Barrascis	50.50	34.33	4.73	15.17
Hub	58.68	37.20	2.38	4.12
Boutilier	48.78	34.14	6.79	17.08
Backpit	52.75	33.33	5.65	13.92
Tracey	51.04	35.18	7.03	13.78
Mullins	55.23	32.94	5.19	11.83
Spencer	52.94	37.33	4.37	9.73

APPENDIX II

The various bankheads and surface plants were inspected only in a general manner. In several Exhibits there have been filed with the Commission considerable detailed information and tables showing the type and size of major pieces of equipment, both surface and underground. In the time available for the inspections it was not practical to list and inspect such equipment. Rather it was the purpose to note the type of construction, the suitability of equipment, the service it was performing, its general operating condition, and the efficiency with which it was being used.

DETAILED INDEX OF APPENDIX II

No. 1 B Mine

No. 2 Mine

No. 4 Mine

No. 11 Mine

No. 12 Mine:

No. 16 Mine

No. 18 Mine

No. 20 Mine

No. 24 Mine

No. 25 Mine

No. 26 Mine

Princross Mine

Florence Mine

Haulage and Hoist Data by Mines
Dominion Coal Company

Horsepower and Electric Hoists and
Locomotives, Dominion Coal Company

Ventilation Data and Equipment
Dominion Coal Company

Record for 1925-1945, Cape Breton Mines
Showing Increase in Water Gauge Account
of Extensions Seaward

OUTPUT, HAULAGE, AND HOIST DATA

<u>Colliery</u>	<u>Daily Capacity (Long Tons)</u>	<u>Main Haul and Hoist</u>	<u>Slope Length Shaft Depth (Feet)</u>	<u>Percent Grade</u>	<u>Type of Haulage</u>
No. 1B	3,600	Deep Relay	4,200	23	1,800 HP 6,600 v. electric trip to transfer
		Deep Relay	8,600	12	1,200 HP 6,600 v. electric trip to transfer
		Main Haulage	18,600	1	15-ton 240 HP electric trolley to shaft
		Shaft	670 Vertical		1,600 HP 2,200 v. electric hoist to tipplo
No. 2	2,000	North Deep	17,700	4.6	450 HP 2,200 v. electric endless haulage to shaft
		South Deep	19,000	7.0	450 HP 2,200 v. electric haulage to shaft
		Shaft	842 Vertical		2,000 HP steam hoist to tipplo
No. 4	2,250	Main Deep	20,100	9	400 HP steam endless haulage to shaft
		Shaft	175 Vertical		1,280 HP steam hoist to tipplo
No. 11	550	Main Deep	13,500	7.8	400 HP 550 v. electric endless haulage to tipplo
No. 12	3,300	Deep Relay	4,200	22	1,325 HP 2,200 v. electric trip haulage to transfer
		Main Deep	8,000	17.8	1,500 HP steam trip haulage to tipplo
No. 16	2,700	Deep Relay	3,700	19.8	1,500 HP 2,200 v. electric trip haulage to transfer
		Main Deeps	7,600	17.6	1,500 HP 6,600 v. electric trip haulage to tipplo
No. 18	1,100	Main Deeps	3,200	26.5	1,200 HP 6,600 v. electric trip haulage to tipplo
No. 20	2,000	Main Haulage	8,000	1.5	15-ton 240HP electric trolley locomotives to transfer in No. 2
No. 24	1,000	Main Deeps	9,900	8.5	300 HP 2,200 v. electric endless haulage to tipplo
No. 25	700	Main Deeps	3,200	4.0	20-ton 240 HP electric trolley tipplo
No. 26	1,200	Main Haulage	17,500	1.5	15-ton 240 HP electric trolley locomotive to shaft

DOMINION COAL COMPANY LTD., SYDNEY, N.S.STATEMENT SHOWING ELECTRIC HORSEPOWER ON UNDERGROUND
STATIONARY HAULAGE ENGINESFor Years 1935 to 1945 Inclusive

COLLIERY	1935	1936	1937	1938	1939	1940
Dom. No. 1-B	2650	2600	2775	3250	3220	3345
" " 2	1200	1650	1650	1650	1650	1650
" " 4	450	450	450	450	450	465
" " 10	450	375	450	450	375	150
" " 11	275	375	375	375	375	375
" " 12	1700	1700	1625	1925	1925	1925
" " 16	225	225	300	1800	1800	1800
" " 18	--	--	--	--	--	--
" " 20	--	--	--	--	--	--
" " 24	690	675	675	830	935	920
" " 25	--	--	--	--	--	--
TOTALS	7640	8050	8300	10730	10630	10945

OLD SYDNEY COLLIERIES, SYDNEY MINES, N. S.

COLLIERY	1935	1936	1937	1938	1939	1940
Princess	--	--	--	300	300	300
Florence	550	550	550	550	550	550
TOTALS	550	550	550	850	850	850

ELECTRICAL HORSEPOWER ON ELECTRIC LOCOMOTIVE
HAULAGES FOR YEARS 1935 to 1945
(Inclusive)

COLLIERY	1935	1936	1937	1938	1939	1940
Dom. No. 1-B	960	960	960	960	960	960
" " 20	--	--	--	--	240	240
" " 25	--	--	--	--	--	--
TOTALS	960	960	960	960	1200	1200

DOMINION COAL COMPANY LIMITED, SYDNEY, N.S.STATEMENT SHOWING ELECTRIC HORSEPOWER ON UNDERGROUND STATIONARY HAULAGE ENGINES (Continued)

COLLIERY	1941	1942	1943	1944	1945
Dom. No. 1-B	3995	4145	4095	5215	5215
" " 2	1650	1650	1200	1200	1200
" " 4	465	540	690	715	640
" " 10	75	--	--	--	--
" " 11	225	225	225	225	225
" " 12	1850	2075	2125	2125	1975
" " 16	1800	1800	1800	1800	1800
" " 18	--	340	550	550	550
" " 20	--	--	350	350	350
" " 24	885	1050	900	940	940
" " 25	--	--	150	205	205
TOTALS	10945	11825	12085	13325	13100

OLD SYDNEY COLLIERIES, SYDNEY MINES, N.S.

COLLIERY	1941	1942	1943	1944	1945
Princess	300	300	300	600	600
Florence	550	250	250	250	250
TOTALS	850	550	550	850	850

ELECTRICAL HORSEPOWER ON ELECTRIC LOCOMOTIVE
HAULAGES FOR YEARS 1935 to 1945
(Inclusive) (Cont'd)

COLLIERY	1941	1942	1943	1944	1945
Dom. No. 1-B	960	960	960	960	960
			4-240 H.P., 15 Ton Locomotives		
" " 20	240	240	240	240	240
			1-240 H.P., 15 Ton Locomotive		
" " 25	240	240	240	240	240
			1-240 H.P., 20 Ton Locomotive		
TOTALS	1440	1440	1440	1440	1440

DOMINION COAL COMPANYVENTILATION EQUIPMENT - Year 1944

<u>Name of Mine</u>	<u>Means of Ventilation of fan</u>	<u>Name of fan</u>	<u>Size of Fan</u>	<u>Rated Capacity in Cu. ft. per min.</u>	<u>Rated W.G. in inches</u>
No. 1	Mo. Pressure	Sirocco	10' x 5'	300,000	6.
No. 2	"	Walker	20' x 7'-6"	400,000	10
No. 4	I "	Sirocco	7' x 3'-6"	125,000	4
	II "	Sirocco	3' 9" x 4'	80,000	3.93
No. 11	"	Sirocco	6 x 4	75,000	2
No. 12	" Exhaust Fan	Sirocco	5' 9" x 3'-0"	100,000	7.5
No. 14	" Exhaust Fan	Sheldon	4' 9" x 2' 3½"	74,000	7.2
No. 16	" Pressure Fan	Sheldon	5' 8" x 2' 9"	113,000	9.5
No. 18	" Pressure Fan	Sirocco	4' 0" x 2' 6"	50,000	2.5
No. 20	" Pressure Fan	Sirocco	4' 0" x 2' 6"	80,000	4.0
No. 24	" Pressure Fan	Sirocco	6' x 4'	75,000	2.0
No. 25	" Pressure Fan	Sirocco	3' 6" x 3' 7"	20,000	0.2

DOMINION COAL COMPANYVENTILATION EQUIPMENT - Year 1944.

<u>Name of Mine</u>	<u>Average Quantity of air in C. F. M.</u>	<u>W. G. Inches Produced</u>	<u>H.P. of Motor</u>	<u>Location of Fan Surface or Undergound</u>
No. 1B	185,000	5.0	600	Surface
No. 2	190,000	5.5	500	"
No. 4 I	85,300	5.2	150	"
II	--	3.9	175	Undergound
No. 11	34,200	2.9	100	"
No. 12	66,000	6.8	175	"
No. 14	74,000	7.5	150	"
No. 16	123,000	10.7	400	"
No. 18	29,800	2.75	58	"
No. 20		6.6	200	"
No. 24	45,100	3.4	100	Surface
No. 25	<u>15,800</u>	0.2	<u>30</u>	Undergound
TOTAL	848,200		2638	

S.

-3816-

Dr. L.E. Young

<u>Name of Mine</u>	<u>Total Length of maintained intake and Return Airway Miles</u>	<u>Gas Produced Per Ton of Coal Mines</u>	<u>Cu. Ft. CH₄ per Minute</u>
No. 1B	28.7	1310	1350
No. 2	19.8	2800	1180
No. 4 I	20.8	880	680
II	--	--	--
No. 11	9.25	485	106
No. 12	19.4	1290	575
No. 14		--	465
No. 16	12.4	1190	1200
No. 18	5.49	235	78
No. 20	10.2	1310	800
No. 24	17.6	342	135
No. 25	1.8	86.5	95

No. 1B increased at Dec. 31st, to 242,000 with 8.0" W.G.

NOTE:

Where underground fans are in use, the quantity of air is included in the surface.

DOMINION COAL COMPANY

VENTILATION EQUIPMENT - - Year 1944

<u>Year</u>	<u>DOMINION NO. 1B</u>			<u>DOMINION NO. 2.</u>		
	<u>Quantity</u>	<u>W.G.</u>	<u>Dist. from Shaft</u>	<u>Quantity</u>	<u>W.G.</u>	<u>Dist. from Shaft</u>
1925	79200	3.6	11,000	163000	4.4	11,400
1926	101500	3.5		158000	4.5	
1927	112900	3.7		172100	5.0	
1928	114800	3.9		171500	4.95	
1929	133600	4.9		163500	6.05	
1930	119000	4.7	17,400	167000	6.15	17,000
1931	111000	4.6		216000	6.8	
1932	124000	4.5		216000	6.6	
1933	113000	4.6		198000	6.3	
1934	129000	4.8		181000	6.8	
1935	129000	5.0	19,000	194000	7.0	17,400
1936	159000	4.9		189000	6.3	
1937	162000	4.9		178000	6.6	
1938	173000	5.7		178000	6.8	
1939	159000	5.4		194000	6.5	
1940	168000		19,800	211000	7.1	18,200
1941	178000	5.3		204000	5.8	
1942	179000	5.0		202000	6.2	
1943	175000	4.8		195000	5.0	
1944	184000	4.6		184000	5.4	
1945	203000	7.9	20,600	205000	5.5	17,200

STATEMENT SHOWING QUANTITY AND WATER GAUGE OF AIR

ALSO DISTANCE SEAWARD

DOMINION NO. 4DOMINION NO. 11

<u>Year</u>	<u>Quantity</u>	<u>W.G.</u>	<u>Dist. from Shaft</u>	<u>Quantity</u>	<u>W.G.</u>	<u>Dist. from Shaft</u>
1925	51800	2.8	14000			
1926	59100	3.0		32500	0.9	4900
1927	55000	2.9		41600	0.85	
1928	58500	3.3		42000	0.9	
1929	60000	3.55		52500	1.3	
1930	64000	3.8	17000	52600	2.1	8200
1931	65000	4.0		58000	2.1	
1932	68000	4.7		54000	2.0	
1933	70500	5.0		53000	1.8	
1934	69000	5.1		62000	1.9	
1935	101000	5.25	19200	49000	1.75	8800
1936	104000	5.3		62000	2.5	
1937	92000	5.3		60000	2.65	
1938	94000	5.3		51500	2.7	
1939	88000	5.0		46000	2.7	
1940	89000	5.2	20800	44000	2.5	11600
1941	87000	5.1		40500	2.5	
1942	86000	5.0		40000	2.8	
1943	86000	5.0		40000	2.9	
1944	84000	5.0		35000	2.9	
1945	80000	4.8	23000	34700	2.8	15700

STATEMENT SHOWING QUANTITY AND WATER GAUGE OF AIR

ALSO DISTANCE SEAWARD

DOMINION NO. 12Dist. from
ShaftDOMINION NO. 16Dist. from
Shaft

<u>Year</u>	<u>Quantity</u>	<u>W. G.</u>		<u>Quantity</u>	<u>W. G.</u>	
1925	88100	1.6	7200	48500-	1.3	5400
1926	97600	1.6		40000	1.5	
1927	89600	2.4		56000	3.2	
1928	84000	2.4		64000	3.45	
1929	86600	2.4		57900	3.4	
1930	92000	4.1	8800	60000	3.4	7400
1931	101500	5.0		53600	3.4	
1932	104100	4.9		60900	3.4	
1933	108000	4.7		55800	3.2	
1934	89000	5.4		49000	3.1	
1935	130900	$\frac{5.2}{3.3}$	9400	76800	6.7	7600
1936	137500	$\frac{5.0}{5.1}$		80000	6.7	
1937	15500	$\frac{5.2}{6.2}$...		77000	7.3	
1938	155500	$\frac{4.8}{7.2}$		72800	6.9	
1939	147300	$\frac{5.3}{7.2}$		73800	7.3	
1940	137900	$\frac{7.2}{6.8}$		77600	7.2	9800
1941	131000	$\frac{7.1}{6.8}$		80800	7.0	
1942	126500	$\frac{7.3}{7.1}$		107000	10.4	
1943	139100	$\frac{7.3}{7.2}$		114600	10.6	
1944	140000	$\frac{7.5}{6.65}$		120000	9.6	
1945	129400	$\frac{7.3}{6.9}$		136000	11.9	10600

STATEMENT SHOWING QUANTITY AND WATER GAUGE OF AIR, ALSO DISTANCE SEAWARD

S.

-3820-

Dr. L. E. YoungDOMINION NO. 18DOMINION NO. 20

<u>Year</u>	<u>Quantity</u>	<u>W.G.</u>	<u>Dist. from Shaft</u>	<u>Quantity</u>	<u>W.G.</u>	<u>Dist. from Shaft</u>
1925						
1926						
1927						
1928						
1929						
1930						
1931						
1932						
1933						
1934						
1935						
1936						
1937						
1938						
1939						
1940				68000	3.05	
1941	28300	1.35		64000	4.2	
1942	23000	1.95		68000	4.2	
1943	29200	2.7		78000	7.8	
1944	31000	2.6		90000	6.4	
1945	29000	11.9	10600	29000	2.6	6600

STATEMENT SHOWING QUANTITY AND WATER GAUGE OF AIR
ALSO DISTANCE SEAWARD

S.

-3821-

Dr. L. E. YoungDOMINION NO. 24DOMINION NO. 25

<u>Year</u>	<u>Quantity</u>	<u>W.G.</u>	<u>Dist. from Shaft</u>	<u>Quantity</u>	<u>W.G.</u>	<u>Dist. from Shaft</u>
1925	48400	0.6	4200			
1926	46200	0.55				
1927	37500	0.65				
1928	40000	0.85				
1929	40000	1.15				
1930	41000	3.8	8000			
1931	44500	2.9				
1932	63000	2.9				
1933	55500	2.65				
1934	61000	2.7				
1935	47000	2.8	8500			
1936	42000	2.8				
1937	49000	2.8				
1938	53000	3.1				
1939	47000	3.45				
1940	49000	3.25	9600			
1941	45000	3.25				
1942	41500	3.25				
1943	44500	3.2				
1944	43788	3.35		13600	0.25	
1945	41400	3.3	10200	12600	0.2	3600

STATEMENT SHOWING QUANTITY AND WATER GAUGE OF AIRALSO DISTANCE SEAWARD

S.

-3822-

Dr. L. E. Young

PRINCESSFLORENCE

<u>Year</u>	<u>Quantity</u>	<u>W. G.</u>	<u>Dist. from Shaft</u>	<u>Quantity</u>	<u>W.G.</u>	<u>Dist. from Shaft</u>
1925	53800	2.0	12300	58900	2.4	12000
1926	51800	2.0		73680	2.6	
1927	48550	2.2		69100	2.6	
1928	51340	1.8		54950	2.8	
1929	44800	2.7		51800	2.65	
1930	33200	1.8	12500	51000	3.3	14200
1931	60750	6.0		46500	3.4	
1932	59200	6.25		44900	3.45	
1933	65200	6.5		48700	3.4	
1934	50900	6.5		45900	3.45	
1935	44000	6.8	13900	49200	3.7	14800
1936	45200	6.7		44000	3.75	
1937	43200	7.25		43200	3.7	
1938	48000	7.05		51400	6.2	
1939	46200	7.2		56100	6.25	
1940	47500	7.1	14700	52900	6.1	16000
1941	48000	6.9		56000	5.7	
1942	43000	7.3		58400	5.6	
1943	50400	7.1		53000	5.6	
1944	54200	7.1		58300	5.7	
1945	48700	7.2	15100	59000	5.65	18200

BOOSTER FAN INSTALLED NO. 4 COLLIERY 1935

" " " " 20 " 1939

TWO FANS INSTALLED NO. 12 COLLIERY 1935OFFICE OF ASST. MINING ENGINEER,
SYDNEY, N. S., Aug. 13, 1945.STATEMENT SHOWING QUANTITY AND WATER GAUGE OF AIRALSO DISTANCE SEAWARD

APPENDIX IIIDOMINION STEEL & COAL CORPORATION, LIMITEDCAPE BRETON OPERATIONSMEMO AS TO COAL WASHING PLANTS

1. A Coal Washer situated near Morion operated from 1897 until 1908, when it was destroyed by fire. Slack coal was washed for shipment via Louisburg to New England gas plants. The New England market was decreasing at the time the fire destroyed the plant and it was never rebuilt. The capacity is said to have been about 50 tons per hour when built, but in 1901 this was increased to 125 tons per hour.

2. In 1912, with a view to offering a better slack product to the St. Lawrence trade, the Dominion Coal Company built near their piers at Sydney a Baum Washer having a capacity of 120 tons per hour. It came into operation just prior to the first World War. As shipments up the St. Lawrence became curtailed because of war conditions the plant ceased washing commercial coal, but continued until 1918 in the preparation of metallurgical slack for the Sydney Steel Plant. Washing costs were high and when a Baum Washer was erected in the Steel Plant this Washer ceased operating.

However, in 1928, advantage was taken of the equipment and storage facilities of the Washer to convert it into a re-screening plant, for the purpose of re-screening coal which had been banked in storage and this practice was continued until 1938 when facilities for this purpose having been installed at the Montreal docks, the Sydney plant was closed down and re-screening done at Montreal.

3. In 1914, the Nova Scotia Steel & Coal Company erected a Baum Washer at Sydney Mine, having a capacity of 100 tons per hour. The product was entirely metallurgical for use in the Steel Plant at Sydney Mines, which was shut down in 1922, on which date the Washer also ceased operating.

4. In the early operations of the Steel Plant at

Sydney, washing slack for metallurgical use was done in a Washer operated on the Campbell "bumping table" principle. Later, as mentioned, the Dominion Coal Company prepared some slack for the Steel Plant until about 1918 when a Baum Washer was erected in the Steel Plant, which Washer is still in use. The rated capacity of the new Washer was 150 tons per hour, which more than provided for the needs of the Steel Plant and in pre-war years an average of 60,000 tons of coke yearly became available for sale to the public. This has now increased to 120,000 tons per year.

Office of the General Manager,
Sydney, N. S., July 31, 1945.

(Page 3826 follows)

AFTERNOON SESSION

The Commission reconvened at the Court House at 2 P.M.

DR. YOUNG: The question was asked me as to the contents of this Part II. Part II contains specific reference to the various mines visited in Nova Scotia other than the mines of the Dominion Coal Company and the Old Sydney. The notes on Dominion and Old Sydney are included in appendix II of Part I of the Report, and the notes on all the other mines are included in this section of Part II. It is just a matter of timing and putting them together.

BY COMMISSIONER McLAURIN: This Part II then is the same as your appendix to ---

DR. YOUNG: It is a little more specific. Where there is something specific I want to say about Bras d'Or I say it; it relates to Bras d'Or only.

BY COMMISSIONER McLAURIN: But it contains just some factual information with respect to these mines? It doesn't contain anything comparable to the main body of Part I?

DR. YOUNG: No, it does not, except where there are specific recommendations that would apply to that particular mine or property only. All the general notes are in Part I.

BY COMMISSIONER McLAURIN: Do you propose to read Part II?

DR. YOUNG: The major part of it, I think.

(Proceeds to read Exhibit 203):

The Bras d'Or Coal Company, Limited

This company operates two mines on sub-leased coal lands. All of the mining operations are on the north side of Sydney Harbour and generally are carried on under unfavorable seam and mining conditions.

Toronto Mine or Colonial No. 1 Mine operates in the Colonial Seam. The coal is 30 to 36 inches thick and is high ash and high sulphur. This mine was not visited. The roof conditions are reported to be bad and the mine is very wet. It has an average output of 200 tons per day with a production of 1.4 to

1.5 tons per man shift. Only a small tonnage remains unmined.

Franklin Mine

Visited this mine on May 23 and August 6, 1945, to observe the use of shaking conveyors and duckbills.

Coal Seam. The seam worked is the Upper Jubilee, which is considered to be the upper split of the Phalen Seam. The seam is about 4 feet thick, but in some of the sections visited, the coal measured as much as 55 inches, while on the south side the seam thins to 24 inches and less.

There are numerous gashes or clay seams cutting across the coal seam at various angles, which condition results in difficult mining and increased impurities in the coal as mined.

In general the roof is not good. Due to impurities in the bottom coal, the undercut is frequently made several inches above the floor. About 6 inches of top coal is bony and is picked out on the tipple.

The coal is of inferior quality as compared with the full Phalen Seam.

Slope and Haulage. The slope was put down in 1939 and is on a pitch of 8 to 10 per cent. It was stopped at the limits of the lease, at about 5000 feet from the portal.

An electric hoist hauls a five-car trip of drop-bottom cars to the tipple, where they unload automatically into storage bins. The cars hold 2.5 tons and stand 24 inches high so that they may be used in development work, if necessary.

Mining Practice. Entries to the dip are driven by hand and rise workings are driven by shaking conveyors and duckbills.

The system of mining is room-and-pillar and originally the rooms were turned up the pitch off the entries which were driven right and left from the Slope on a 2 per cent grade. The practice was to drop the loaded trips on this 2 per cent grade and to haul the empties back with an electric hoist (25 HP single drum).

The present practice is to drive two entries on the

strike on a 2 per cent grade and to turn three panel entries up the full rise, with rooms turned parallel to the entries. Rooms are 26 feet wide on 40-foot centers and 300 feet deep. Pillars are not mined. The projection of rooms, etc., is now being changed to permit the more effective use of the available equipment and to reduce the time lost in moving equipment and crews.

Standard electric undercutting machines and electrically-driven shaking conveyors with duckbills are used. There are four units installed and three more have been purchased, for early delivery. Post-mounted electric drills are used. Blowers are installed to remove the powder smoke.

When possible, the material from the gashes is gobbed in the working place back from the face, and, if necessary, in adjacent worked-out rooms. Waste that must be taken outside is hauled from the tipple by trucks.

In the statement filed with the Commission in April 1945 the Bras d'Or Company referred to this handicap of waste in the coal and falling stone in the following language:

"There is considerable stone to handle at Franklin, both from the coal face and falling stone from the roof. This stone accounts for an additional 1.6 tons per man shift, which added to the 12.9 tons of coal (loaded at the face per producer per shift) brings up the actual face production to 14.5 tons per man."

General. A total of 200 tons is expected per day. The equipment and plant is first-class. The facilities for screening coal and meeting market requirements are commendable.

The local management is enterprising and labor appears to be cooperative.

INDIAN COVE COAL COMPANY, LIMITED

This company is operating three mines on coal sub-leased from DOSCO. None of these mines was visited, but a conference was held at the office of the company with the general manager and manager.

The present tonnage is estimated at 60,000 tons per year.

Greener Mine

This mine is opened in the Indian Seam, known also as the

Jubilee. The seam measures 4 feet 2 inches, dips about 10 per cent, and has good roof. The production of 100 tons per day is secured by room-and-pillar mining from a depth of about 1800 feet along the pitch of the bed. The life of the mine is estimated at 10 to 25 years, depending on daily tonnage and number of days operation.

Tomson Mine

This mine is opened in the Indian Seam and has reached to 1800 feet along the coal seam. About 8 inches of poor quality coal is left for roof, which results in an average mining height of 42 inches. This practice gives a good roof and there is a good floor. With a production of 60 tons per day, the life of the mine is estimated at 8 to 10 years. The management believes that conditions are favorable for loading machines and shuttle cars.

Sullivan Mine

This mine is opened in the Sullivan Seam which is 36 to 40 inches thick. The mine roof is reported to be poor, but the quality of the coal is good. Production per day averages 60 tons.

General

The men drill the coal by hand. Ponies are used to haul coal in the rooms and entries, except in Tomson mine where the men push the cars in the rooms.

Absenteeism was reported to be 18 to 20 per cent, with few men willing to work more than four days per week.

ACADIA COAL COMPANY, LIMITED

The present operations of the Acadia Coal Company, in the Pictou Coal Field, include the Allan, the Albion, and the Acadia No. 7 Mines, all located near Stellarton, Pictou County. The coal measures, which are of Pennsylvanian age, are faulted seriously. This fact has added substantially to the cost of development of various beds, as well as the subsequent mining operations.

There are a number of thick seams which have been worked

for more than 100 years. The geology of the Field has been studied very thoroughly and elaborate reports have been compiled and published by the Canadian Department of Mines and Resources.

Probably the most complete and recent Dominion geological report is Dr. W. A. Bell's Geological Survey, Memoir 225, published in 1940, and entitled "The Pictou Coalfield, Nova Scotia." In Chapter IV, page 65, in discussing the coal resources, he says:

"On account of the extreme variability both in thickness and quality of the coals of this coalfield within short distances, the writer believes that estimates of reserve tonnage of workable coal would in most instances be so subject to error as to be of little value. Accordingly, in this following discussion he draws attention to what is known or inferred about the distribution of each coal or group of coals, stressing particularly the directions from areas of best coal in which rapid deterioration has been noted."

Dr. Bell then reviews the numerous coal seams of the Westville, Albion, Coal Brook, and Thorburn members of the Stellarton series which includes the economically productive coal-measures of the field. The Stellarton series underlies an area about 11 miles long by 3 miles wide. In the submission by the Acadia Coal Company (Exhibit 52), a summary is given of the seams worked and a typical section of the coal field is given, as follows:

<u>Thorburn Member</u>	<u>Thickness in Feet</u>	
Captain Seam	3 - 4	
Strata		57
Millrace Seam	3	
Strata		62
MacKay Seam	3 - 4	
Strata		590
Sixfoot Seam	3 - 6	
Strata		750
McBean Seam	3 - 8	
Unknown Strata		
estimated to be 2000 feet		

<u>Albion Member</u>	<u>Thickness in Feet</u>	
Foord Seam Strata	30 - 40	140
Cage Seam Strata	12 - 20	140
Third Seam Strata	12 - 20	75
Purvis Seam Strata	3 - 4	125
Flemming Seam Strata	5 - 7	5
McGregor Seam Strata	12 - 20	70
Acadia No. 1 Seam Strata	8	150
Norah Seam Strata	6	50
No. 5 Seam Strata	21	50
No. 6 Seam Strata	5	60
No. 7 Seam Strata	20	100
No. 8 Seam Strata	24	50
No. 9 Seam	23	
Unknown Strata estimated to be 1000 feet		

Westville Member

Westville Main Seam Strata	14 - 17	200
Scott Seam Strata	12	115
Third Seam Strata	6	90
Fourth Seam	8	

The seams are very gassy and mining operations are most difficult. Extensive areas have been mined over and portions of the old works are a menace to present-day operations and introduce many difficulties. Spontaneous heating is a continuing hazard and extreme precautions are taken to prevent fires if possible, to localize them if they occur, and to extinguish them completely without delay.

In general, the coal being mined is low in sulphur and has a high ash-fusion, but is somewhat higher in ash than the best grade of Cape Breton coal.

Large tonnages of workable coal undoubtedly remain in the mines. All of the seams have not been prospected completely, but it is estimated there is not less than 10,000,000 tons of mineable coal remaining in the Acadia seams, excluding the McBean, in which there is an additional 5,000,000 long tons.

An inspection was made of a small portion of the workings of the operating mines of Acadia Company on May 28 and 29, 1945, primarily for the purpose of noting the general working conditions and the feasibility of mechanizing the loading of the coal.

The difficulties incident to mining the several seams are many, as has been stated at length in earlier reports by distinguished mining engineers, such as Dr. George S. Rice, who made an elaborate report to the Royal Commission on Acadia Coal Company in 1937.

The physical conditions have become worse since that date. The engineering approach to the problems has been sound. At the present time, consideration is being given to the use of mechanical loading devices operated by compressed-air, and it is hoped that where conditions are most favorable, some improvement in operating costs may be made.

In general, it must be said that the outlook for improving production and reducing costs at the mines now open is not encouraging.

INTERCOLONIAL COAL COMPANY, LIMITED

This company operates No. 1, No. 2 and No. 5 Mines at Westville, Pictou County. Of the four known coal seams in the area, only No. 1 and No. 2 are workable.

This property was visited on May 30, 1945, and underground conditions were noted in No. 1 Mine.

No. 1 Mine is located on No. 1 Seam which is 16 feet thick. The main slope is down 3875 feet and reaches a vertical

depth of 1727 feet. The top 9 feet of the seam was mined previously by bord-and-pillar with some modified longwall. At present the bottom $6\frac{1}{2}$ to 7 feet is being mined by a bord-and-pillar system. In much of the mining under the old works it is the practice to drive bords about 12 feet wide, building cribs and also placing crossbars and lagging as may be required. The caved material in the old works is tightly packed, but will not stand without support. Due to the irregular conditions, special methods must be devised to meet local situations in order to recover the maximum percentage of coal safely. Mining is by hand pick, and drilling is done with jackhammers. The quality of the coal from this seam is very good.

No. 2 Mine is on the Scott Pit Seam which is 16 feet thick. Radialax cutter and air drills are used on development work. The coal is mined longwall using air-driven longwall cutters with a 5-ft. bar. The length of wall has varied from 155 to 235 feet, due to local conditions.

When the coal is not undercut and the seam pitches sufficiently to permit the coal to run on slides, the coal works very freely without heavy shooting. Under such conditions, the output per face producer is very good.

No. 5 Mine also is on the No. 1 Seam, mining the bottom bench, the upper bench having been mined 60 to 70 years ago. This was formerly known as the Acadia Colliery No. 5, and was acquired by the Intercolonial Company in 1914. At 150,000 tons per annum, this mine has a life of 5 years.

This company now employs 445 men and can use 100 more. The output per man-day is 1.5 tons; in 1944 it was 1.6 tons, and in 1943 it was 1.7 tons.

GREENWOOD COAL COMPANY, LIMITED

The operations of this company are near New Glasgow in the Pictou Field. Visited this property on May 29, 1945, and conferred with the officers of the company, but did not go underground.

Greenwood No. 3 Mine is opened in the Captain Seam on coal leased from the Acadia Coal Company. The lower MacKay Seam has been worked out and most of the coal in the saucer-like basin of the Captain Seam has also been mined over.

The seam now being worked has averaged 3 feet in thickness and the roof is poor. The slope extends 1350 feet to the bottom of the basin. The coal remaining amounts to 60,000 tons and this will probably be mined within $1\frac{1}{2}$ to 2 years. Additional coal must be leased if the company is to continue operations.

Present Mining Practice. Room-and-pillar mining is followed and pillars are mined. The places are carried 10 feet wide on 35-foot centers. Faults interfered with longwall mining and it was necessary to change to room-and-pillar.

Shortwall cutters were formerly used, but at present the coal is now undercut as the pitch exceeds 25 degrees.

There are eighty men employed underground and about twenty-five on the surface. On May 28, there were ninety-nine men at work. The average output per day is 105 tons, with fifty to sixty men working at the face.

CUMBERLAND RAILWAY & COAL COMPANY, LIMITED

Springhill - Cumberland Coal Field

The Cumberland Coal Field extends from Joggins to the town of Springhill, a distance of about 25 miles. The average width of the coal field does not exceed 12 miles and the entire area is situated in Cumberland County.

Coal of commercially mineable thickness and quality has up to date been found to exist in only three comparatively small districts, namely, at Joggins, in the River Hebert district, and at Springhill. In the vicinity of Springhill, the area over which the productive coal measures crop out to the surface covers about 20 square miles.

The section through the five workable seams at Springhill is as follows:-

		Thickness		
		Ft.	In.	Feet
No. 3 Seam		10	-	
Strata				280
No. 1 Seam	Coal	4	0	
	Rock			30
	Coal	4	0	
Strata				70
No. 2 Seam		9	0	
Strata				630
No. 7 Seam		4	8	
Strata				80
No. 6 Seam		5	6	
Total		37	2	1090

All of these seams have been worked. At the present time only No. 1, No. 2, and No. 7 Seams are being mined. When market conditions warrant, the other seams can also be worked.

The coal in all seams is bituminous and of a fairly friable nature. It is a good grade steam coal, suitable for domestic use and possesses coking qualities.

The coal measures, where they have been developed to the greatest extent, dip to the west at an angle of 30 degrees at the outcrop, but this angle of inclination gradually decreases to the dip in the line of main slopes to about 12 degrees.

Boreholes prove that the productive measures still continue to dip to the west under rocks of the upper carboniferous period. At a distance of 2 miles from the outcrop, the rate of dip has been proved to be 17 degrees, which would give a vertical cover of 4100 feet at this point.

Seven miles west of the outcrop coal seams are found dipping sharply to the east and although these seams are inferior in number and quality to those mined at Springhill and cannot be correlated with them, it is reasonable to presume that they may represent the Springhill seams on the opposite side of an intervening syncline.

The drilling and geological field work indicate that the estimated recoverable coal adjacent to the present main openings amounts to 17,400,000 tons, and a life of 25 years on the basis

of 650,000 tons per year. These estimates are based on present mining practice and the present methods of working in areas where "bumps" may occur.

Inspected underground workings of No. 2 and No. 4 Mines on May 31 and June 1 to get a general idea of the seam conditions, methods of mining, and possibility of introducing mechanical loading devices.

Bumps

Particular attention was paid to the engineering studies in connection with "bumps" which have been a serious hazard at Springhill No. 2 Mine. Elaborate data are available on this subject, including the Report by Dr. George S. Rice, made in 1924, while he was Chief Mining Engineer of the United States Bureau of Mines. In this report there is a record of 75 bumps occurring between July 4, 1923, and August 25, 1924.

More recent data on this subject are included in a paper by Mr. T. L. McCall presented to the Canadian Institute of Mining and Metallurgy in 1936 and entitled "Some Coal Mining Practices of the Dominion Steel and Coal Corporation, Limited."

As the future of coal mining at depth in the Springhill Area depends largely on safe mining practice in or near sections where "bumps" have occurred, or may be expected to occur, the essential points that have been developed in the last 20 years are reviewed briefly.

1. Bumps have been experienced when the depth of cover exceeds 2000 feet. As the mining depth increases, the number and severity of the bumps also increases, if certain geological conditions exist in the immediate area.

2. Strong strata in the overlying beds are the chief contributing cause, according to Mr. McCall who has had the opportunity to study the local conditions and follow through the results of different mining methods.

3. A strong shale, 9 to 15 feet in thickness, lies immediately over the coal. In parts of the mine this shale is overlain by other shale beds and where this

sequence occurs, there are no bumps; but where a strong sandstone lies on this lower shale, bumps may occur if the sandstone does not break readily as the underlying beds are broken and caved by orderly mining operations.

By drilling holes into the mine roof for a distance of 60 feet, it is possible to determine the thickness of the overlying sandstone, if present, and to decide whether it is safe to continue mining by the customary method. Mr. McCall stated in the paper noted previously:

"It has been noticed that these bumps began only after the overlying sandstone bed had attained a thickness of 25 feet or more. Arrangements were made to stop all walls before they reached the danger zone."

The present practice which has resulted in reducing greatly the hazard of bumps is as follows:

1. Entries are driven on the strike in the seam at intervals of 300 feet. Holes are drilled about 60 feet into the roof every 500 feet along the entries.

2. Where there is 20 to 30 feet of shale over the coal, it is practical to mine in the normal way, if the overlying sandstone is not more than 20 to 25 feet thick.

3. Where the sandstone thickness is within this critical range, it is customary to drill the roof holes about 125 feet apart along the entry in order to check the thickness of the sandstone.

4. When massive sandstone is present, it is customary to leave 300 feet of coal unmined as a barrier between each pair of walls; similarly, along the entry, it is customary to leave a 300 foot block of coal at intervals and to keep the span (distance along the entry opened by the longwall) down to 1000 feet.

5. Longwall retreating is favored as when entries are driven in the solid coal it is possible to drill holes into the roof to determine the thickness of sandstone that might cause bumps.

General

There is much gas in these mines and there is no shooting. Any face-mining machinery is operated by compressed air.

Considerable experimental work has been done at those mines with scrapers, but without much success. More detailed reference is made to the use of scrapers in the general discussion of mechanization of Cape Breton mines.

It is recommended that compressed-air mobile loaders be tried in connection with entry driving for longwall retreating, and also in mining of pillars in thick coal.

A central cleaning plant serves these mines, cleaning the 1/4 in. by 4 in. coal. The plus 4 in. is hand picked. It was stated that the refuse normally amounts to 8 per cent of the tonnage hoisted.

As previously noted, the future of operations in the present mines depends largely on success in dealing with areas where bumps are likely to occur.

With a reduction of absenteeism and a better proportion of producers, there should be some reduction in operating costs.

JOGGINS - RIVER HEBERT DISTRICT

This district has produced coal for more than 200 years and while the coal is thin and not as good a quality of coal from other Nova Scotia districts, there is a market for some production from this district. There are many difficulties in mining due to faults, clay partings, splint bands, water, and roof conditions. In spite of these handicaps, a creditable showing is being made by the several operating companies.

Coal Seams

There are five coal seams in this district varying from 1 foot to 4 feet in thickness. They dip from 12 to 30 degrees. The most important seams now being worked are the Forty Brine and the Kimberley Seams.

Forty Brine Seam. This is being mined in the western section by two mines, the Bayview No. 8 and the Hillcrest Mines,

where the coal is 29 inches thick. The central section consists of very thin coal, averaging 16 to 18 inches. In the section at River Hebert East, the seam averaged 28 to 30 inches. Strathcona No. 1 Mine was the chief operation in this area, but closed on account of water trouble and the quality of the coal. The Burnrite Mine to the east was obliged to stop working due to poor quality of coal at a depth of 300 feet.

Kimberley Seam. In the western section this seam is not workable. Three boreholes drilled during 1939 did not indicate any workable coal at depth. At River Hebert the seam thickens to 39 inches and it was worked continuously to River Hebert East where the seam thinned to 30 inches. The Minudie Mine at River Hebert was limited by poor quality of coal and a major fault. The Strathcona No. 2 Ine at River Hebert East is working in 22 inches of coal.

Two other seams were mined previously, namely, the Queen and the Joggins. The Queen Seam was workable at only two points; the Joggins Seam was mined from the shore at Joggins to River Hebert East. It is reported that all the operations were stopped on account of the thinning of the coal or the poor quality.

Quality of Coal

Analyses for the Joggins Field are included in Table III of the submission of the Nova Scotia Government to the Commission, as follows:

	<u>Forty Brine Seam</u>	<u>Kimberley Seam</u>
Number of samples averaged	22	19
Moisture, average	3.2 per cent	2.3 per cent
Ash, dry basis		
Average	14.1 per cent	13.7 per cent
Maximum	23.1 per cent	20.0 per cent
Minimum	9.6 per cent	10.0 per cent
Sulphur		
Average	5.4 per cent	5.6 per cent
Maximum	7.2 per cent	6.9 per cent
Minimum	4.5 per cent	1.3 per cent
B.t.u.		
Average	12,290	12,100
Maximum	13,070	12,620
Minimum	10,850	11,340

Some washing tests have been made on coal from this field. While the extraneous ash, from the clay partings, roof, and floor, can be removed, there is considerable inherent ash in the coal which will make it difficult to produce a high-grade coal. It must be recognized also that little improvement can be made in reducing the sulphur content. The losses in refuse would probably be quite high.

JOGGINS COAL COMPANY, LIMITED

Bayview No. 8 Mine

This mine is opened in the Forty Brine Seam which has a thickness of 28 to 36 inches. The roof is good and the floor is hard.

The slope is down 2700 feet on an average dip of 20 degrees, reaching a vertical depth of 900 feet. The mine produces considerable water, the 300-gallon pumps operating 18 hours per day.

There are 173 men on the payroll and on the day previous to the inspection, 150 men reported for work. Twenty-five of these were employed on the surface and 125 underground. For that day, the production was 432 tons or 2.88 tons per man.

Mining Practice

Longwalls are advanced by electric undercutters equipped with 6-ft. bars. The walls are 350 feet long and generally the coal is not shot. When drilling is necessary, hand augers are used.

The coal contains heavy partings and usually falls from the walls in large chunks which must be broken so that they may be handled over the shaking conveyor trough line.

No midwalls are built along the face, but substantial packs are maintained along the entries or roads which later serve for handling supplies for the next wall on the dip.

A wall will produce 175 to 180 tons per day with thirteen miners, but the total organization of the crew on the walls for the three shifts is thirty-two. There were two and one-half

walls producing coal and three levels driving in coal.

The three cutting machines and other mining equipment are electrically driven.

Considering the physical conditions, the production is very creditable.

HILLCREST MINING COMPANY, LIMITED

Hillcrest Mine

This mine is operating on the Forty Brine Seam, the thickness of seam being 30 inches. Seam conditions here are better than at Bayview.

The average tonnage is reported as 440, but on June 1 the tonnage was 361. With 185 men on the payroll, there were 25 surface employees working and 125 underground.

This mine is operated on a sub-lease and appears to be well managed.

STANDARD COAL COMPANY, LIMITED

Strathcona No. 2 Mine

The Kimberley Seam is being worked at this mine. The seam is 30 inches thick and is reported to be cleaner and to have better roof conditions than the Forty Brine Seam.

The slope is down 3000 feet and reaches a depth of 1000 feet. Longwall mining is used, with walls 300 feet long. Electric cutting machines have 6-ft. bars. There is little shooting on the walls as the coal comes down after undercutting as a result of the roof weight.

The labor force is 120, with 95 underground and 25 on the surface. Production is about 200 tons.

GENERAL

There has been considerable drilling in the district, but the faulting, variation in the thickness and quality of the coal seams would indicate the desirability of additional drilling to explore the possible areas in the several seams.

Proposals to build a central cleaning plant merit most

serious consideration of the post-war markets that will be available for coal of the quality this field produces.

BY MR. FRAWLEY: I have no questions, Mr. Chairman. After other counsel have finished I may just have one or two to complete matters, so either Mr. Forsyth or Mr. Cohen, whoever they have agreed on should go first?

BY MR. FORSYTH: I don't know that we have agreed on anything, but I haven't any questions to ask Dr. Young at present.

DR. YOUNG Examined by Mr. Cohen.

Q Dr. Young, I am sure that you will appreciate that I approach the task of addressing questions to you with a great deal of trepidation, having regard to your experience and skill in the field.

A Thank you very much.

Q And that you will deal kindly with me accordingly? I would like to start on that note of mutuality and confidence. Now I note that in a number of places you indicate a program which in your opinion should be carried out in connection with these fields, and for the moment, may I say, I am dealing with Part I, Exhibit 202?

A Yes.

Q And as I read the recommendations I was just a little curious about the time element involved, and then while I was in that state of mind I found that on page 86 of your document you state, however, "If the mechanical loading in (1) room-and-pillar mining and (2) longwall mining is successful, and (3) after the facts as to the necessity for mechanical cleaning have been determined - all possibly within a period of one year after the underground installations have been made - it is suggested that the following steps be taken," and then you indicate 1, 2, 3 steps enumerated, and some further suggestions not appearing in numbered paragraphs. Well now, with respect to the question of time, we have one clue there, so to speak. You estimate that items

1, 2 and 3 which I read could be exhausted, may I say, or disposed of within a period of one year after the underground installations have been made, or installation has been made. Now what period of time would be involved in making that installation, because that would have to be added to the one year?

A Well, the reason I put it that way is, the delivery of underground machinery being so uncertain during the war period that I would not attempt to estimate how long it would take to get the equipment in.. They might get it in three months; it might take six months; it might take nine months. I don't know what the deliveries of the equipment would amount to.

Q Well, Dr. Young, nobody is going to hold you to a day or a month or a cycle of months, so to speak. What we would like to get is your best considered judgment, having regard to the conditions as you know them, as to when the underground installations are likely to be made, assuming that the proposals are carried out?

A Well, I would guess that the equipment probably could be gotten within six months. I have had no occasion to check up, but I presume six months.

Q That is basing that on the best information, so to speak, available to you?

A I think so.

Q And then installing it would take about how long?

A Oh, that shouldn't take very long; a month maybe.

Q Now I want to remind you again that I confess very definitely that I know nothing about these things, so that if I am asking questions that appear to answer themselves very obviously ---

A The matter of installation of underground equipment is not like installing a surface plant that you put on foundations. The place, I mean, would have to be made ready; you would have to lay a track, get the power lines, and much of that work can be prepared while the equipment is being manufac-

tured and before it is delivered.

Q And then after it is delivered a month or so should see the completion of the task?

A I would think the equipment could be placed in service in 30 to 60 days.

Q Thirty to sixty days? Let us say 60 days. That is eight months, then one year for 1, 2 and 3; that is one year and eight months; then the following steps are to be taken as you indicate, still on page 86 of your document: "Complete mechanization should be given consideration first at those mines (seam and roof conditions being equally favorable)

where haulage and other costs can be reduced to a level that may be considered satisfactory, but improvements in haulage at other mines should not wait for complete mechanization," and then you go on to elaborate upon that statement, and again relying upon your own expert knowledge of the subject, how long would that likely take?

A Well, after the decision was made to buy this equipment you would still go through the process then of waiting for the manufacturers to deliver the equipment, and that is pretty hard to guess. It might take another three to six months to get the additional units to put in that mine.

Q In order to mechanize the mine completely?

A To mechanize the mine completely.

Q Three to six months, did you say?

A Yes, according to the equipment you buy, condition of the market generally.

Q Just to be on the safe side one might say six months, and then you have got the limit?

A I would think you could get a good deal of equipment in that time.

Q Then we have eight months, and the one year for items 1, 2 and 3, and six months for the mechanization? Well now, how about items 2 and 3? Are they items that would be carried out contemporaneous with item No. 1, the mechanization, or

would they have to follow in terms of time? Item 2: "If mechanical cleaning is to be inaugurated, a central cleaning plant should be built with sufficient capacity to take the entire tonnage of the mechanized mines."

A Now I presume we are speaking of two or more of these mines, and the sales department would by that time have decided on what they wished to do, and the construction of the cleaning plant would take at least a year after they decided on what they wanted. That would go on simultaneously with the further mechanization of the mines.

Q Well then, assuming that the decision was reached the same time that the decision was reached to mechanize the mines, the second process, that of building the central cleaning plant, would overlap the process of securing mechanization and installing it by a period of about six months?

A I would answer your question yes, but I would think that in fairness to you I ought to explain this, that if this coal requires complete cleaning the central cleaning plant should be completed and in operation before the complete mechanization of the mines, because they would not be able to market all of that unclean coal.

Q Well, you recommended elsewhere here in the document that the cleaning take place and that facilities be provided for such cleaning?

A I am referring now only to the time when you probably would not completely mechanize the mines, if mechanical cleaning was necessary, until you had cleaning facilities times to be ready for complete mechanization of the mines.

Q Well, except this, I am suggesting on the basis of your estimate that it would take one year to establish the central cleaning plant?

A That's right.

Q That if at the same time a decision was reached to mechanize the mines, I suppose one could defer that decision for six months and still have it there in time to synchronize with

the completion of the cleaning plant?

A No, my point is they would go together and the cleaning plant would take longer to build; it would take more time to complete it than to provide the underground machinery.

Q And it would take a year?

A About that.

Q Well, one would not have to wait until that was completed until one ordered the machinery and other facilities for the mechanization of the mine?

A They would go together.

Q So that that one year so to speak takes care of both items?

A That's right.

Q And item No. 3, you say simultaneously there is to be a careful study, so that there is no additional time involved there?

A That's right.

Q Then you go on in the next paragraph and you speak of complete mechanization. I take it that in Item No. 1 earlier on the page you are speaking of one or two mines, or as you put it, two or three mines, with respect to which mechanization might be tried out, is that it?

A Yes. However, let's look at the paragraph at the bottom of the page. I am suggesting that complete mechanization of mines shall be assigned to those mines where haulage facilities and everything else are most favorable.

Q In other words, in the course of completing item No. 1, one would do so at the mines where the decision would achieve the most results?

A That's right.

Q And then the items 1 to 4 enumerated on page 87, they I suppose would come in after the period that we have so far been discussing, or would that be contemporaneous?

A That would be contemporaneous.

Q Well then, that gets us down to approximately eight months to acquire the material for and installing the underground installations, one year for items indicated as 1, 2 and 3

in the first paragraph of page 86, and one year for the completion of the items indicated on pages 86 and 87, is that right?

A Yes sir.

Q That is two years and eight months?

A All right.

Q Which, I suppose, is a fair amount of time in anybody's life, although not very much time in carrying out as complete a program as you indicate, but still some time?

A It is considerable time. In the meantime you will have to train the men and train the mechanics and train the officials, and you will have quite a problem.

Q And employ the men?

A Oh, it won't need new men.

Q I don't speak of new men, but the men who are here. I was wondering what they would be doing during the two years and eight months which would be required to implement this program, the decision so to do having been reached with, let me say, the usual despatch?

A I don't know that you have asked the question, but I think the question in your mind is directed to, why would it take so long?

Q Oh no, on the contrary. I am accepting your statement, based on your knowledge and experience, that it would. My question was, what is the program as to the use of these mines and the employment of men in these localities during this two years and eight months?

A Well, that question, as an engineer, after this first lot of equipment is installed you probably would be using it as extensively as possible, as many shifts a day as practical, in training men.

Q After?

A After the first eight months this equipment would be used as extensively as possible in training men, and probably in the course of two years you would have quite a pool of men available, men who had been working at these mines, who would know

the machines, would know the new methods of mechanics, would be trained to know the machines, so that the two year period following the first eight months would be used very effectively in training men to new machines and new methods.

Q That is very illuminating. I am just interested in what you mean in terms of actual program when you talk of training these men who are going to be brought in as employees?

A They are employees of those very mines.

Q Well, some are expected to enter the district?

A I think the normal practice is for the machinery companies to send demonstrators, we call them, who are not going to be permanent employees of the company, and the company would select the men who would be adept, possibly, at using machinery, men who work at those very mines, and I take it there would be no occasion for bringing in men, even from other mines.

Q Let us assume that the men would be here, and it is a common assumption here we expect a lot of men back, as the men return from the war, they will be seeking employment in these mines. Now what is the program that you would envisage here? Are they going to be brought into the two or more mechanized mines and trained in groups or in routine or something?

A I have no knowledge, of course, of what the policy of the company would be, but it seems to me that the men returning from the front would seek employment in the mechanized mines.

Q Well, what is going to happen with the men who now are employed in those mines that you have just told me of? I mean is there anything in ^{this} whole program--I am not asking this in any critical or unfriendly sense--that indicates some policy of employing the men who will be available for employment until this eight month, or two year and eight month program, whichever you desire to select, is carried out?

A You are assuming that there is a surplus of men now and that there will be during this period? I don't know whether there is or not.

Q I am assuming that there will be more men in this area seeking employment than there are now. That is not an unreasonable assumption, is it?

A No.

Q Well then, assuming that to be so, is there anything at all in this program--and if there is not that doesn't suggest any criticism of yourself, sir; it may not be within your province--but is there anything in this program as to the employment or use of these men during this interim period?

A There is nothing in my report regarding that phase of it. However I have in mind that there are ways and means in which the impact of mechanization can be made as light as possible in any community, in any field, and of course this looks forward to the increased productivity of men at the face, and if that follows it will mean in the long run that fewer men would be employed in the course of the next two, three, five years. There are going to be men undoubtedly who are now on the payroll who will be retired on account of age.

Q Fewer men will be employed? You mean fewer men per ton? Assuming an expanded tonnage there will be more men?

A Sure.

Q What is the process of softening the impact of mechanization?

A I know what some companies have done. Some companies have pension systems and retired men on that basis. In other instances they have a sharing-of-work basis. That was followed in the State of Illinois at the time I was operating there, where if they had more men than was necessary to run the mines and give them all work every day the men agreed among themselves that instead of working every day they would take certain days off in the month so that their brothers and neighbors could have an equal share of work with them during that period.

Q Of course you will agree with me that that principle of sharing an insufficient amount of work for a given number of men

has sometimes been referred to as sharing poverty or under-employment? That is the net result, isn't it?

A I personally don't like the system.

Q For the reason I suggest, that it is really sharing under-employment, isn't that right?

A Yes sir.

Q You disappoint me somewhat if you suggest that as some medium for softening the impact of mechanization.

A I understood you to ask me what methods have been used, and I was listing the methods I have known. I am not endorsing all those methods.

Q Well, I would like to know the methods you endorse. You told us one, that is a pension scheme.

A Are we speaking of the coal mining industry, are we speaking of a particular coal company, are we speaking of a community, are we speaking of a government?

Q We are speaking of the coal mining industry in the Maritime Provinces. Now there is an experiment here first of all that will take some time to carry out, and that is inevitable, and I was interested in knowing whether or not you had as to that period of time covered the question of employing the men, and you have already told us that you did not, so we will leave that. Then you went on to suggest that there would be a certain impact on the number of men employed with relation to a given tonnage, that refers to mechanization, and that there were methods of softening that impact. I asked you to indicate the methods and you were good enough to start doing so by indicating the pension scheme. Now are there any other methods, and if there aren't any that you can think of readily at the moment I don't want to appear to be pressing you.

A I first of all think that the question of displacement of men by mechanization is rather being magnified here, not by you personally but in general. I believe that the rate at which mechanization will be made in this field is going to be rather slow. It is not something that is going to come like

a tidal wave and sweep over the district. It takes time to train men and get the equipment in.

Q We have every respect for you as a mining engineer and expert, but Fate has overtaken many an individual in this country who has attempted to predict political or social trends, so as to whether the mechanization of this industry should go along rapidly or otherwise is not something either you or anybody else can predict with certainty.

A I say that because I have had 25 years experience in that very thing, as one of the chief flag-bearers in the United States. That is why I hazarded that judgment.

Q Flag-bearers of what?

A Underground mechanization. I have spent twenty-five years on it and I think I know what I am talking about. The impact of mechanization in this field is something that deserves most serious consideration, but my thought is that until you know the extent to which this field can be mechanized I question whether barriers might be set up against giving it a most thorough investigation and trial.

Q Well, on the basis of your investigations, to what extent do you think this field can be mechanized?

A I won't guess.

Q I didn't ask you to guess. I asked you to estimate.

A I won't estimate.

Q You will make no estimate?

A I will make no estimate.

Q So that--and again this is not in a quarrelling spirit--despite the well prepared program of mechanization you will not venture any estimate as to the amount of or speed with which that mechanization program should or could be applied in the provinces of Nova Scotia and New Brunswick?

A There are two or three very important factors. There is the physical factor ---

Q Now would you mind, before we list the factors--and I am sure that you will have recognized by now that I am more than

patient with witnesses--do I understand that to be your position, that despite your investigations, and whatever else is contained in Volumes I and II of your report, you will make no estimate as to the speed with which or the degree of mechanization that should be applied in respect to the Maritime mines?

A Did you say "should" or "can" be applied?

Q Should or can or will. Will you make any estimate?

A I will not make any estimate.

Q Now if you want to go into the question of listing the factors, as you refer to them, that make you so hesitant about making an estimate, then I have no desire to interrupt you.

A I think in fairness to myself I want to say that as an engineer I would not undertake to say how important the human side is, the receptiveness of management and labor to a new system; the marketability of the product is so uncertain, and in addition the physical factors as you mine at depth are difficult, and I would not venture an estimate along the lines you ask.

Q Not only along the lines. You would not venture any estimate as to the amount of, or speed with which mechanization should be applied?

A I would not.

Q Now would you mind taking a look at page 84 of your document and you talk there of Period No. 1. Now having regard to your previous remarks, are all those just hypothetical, abstract discussions when you talk of Period 1, or are you talking of a concrete proposal?

A Of a concrete proposal; what I would do if it were my job.

Q I really am afraid that you misunderstand me. I have a rather direct way of putting a question, but I can assure you, in the friendliest spirit. I don't want to ask you about Period No. 1 if it just belongs to some abstract field. This is a concrete proposal?

- A This is a concrete sequence in which I would propose that the interested parties attack this problem if they are going to find a solution that will make it a strictly competitive field.
- Q This problem? What problem?
- A The whole problem of producing costs.
- Q The program that you outline in pages 86 and 87 under Period 2?
- A The whole thing--what are you going to do with the coal industries of Cape Breton and Nova Scotia.
- Q All right. Do I understand that in Period No. 1 you are there making a concrete proposal as to what should be done?
- A That's right.
- Q Let us read the first line: "First stage in the proposed Cape Breton Mechanization Process".
- A That's right.
- Q "Step No. 1. Negotiate an agreement with the United Mine Workers of America, covering day rates for all types of mechanized mining and following the fundamental principles as to wage structure which have proved satisfactory in the United States. This is most essential and no subsequent Step should be undertaken until an agreement has been made that will be broad enough to cover all phases of face mechanization." Now do I understand that that is a concrete proposal?
- A Very definitely.
- Q And that that is the first step that should be taken?
- A Certainly.
- Q Despite the fact that you will make no estimate at all as to the amount of or the time within which or the degree of mechanization that can or will or should be introduced in the Maritime Provinces?
- A Yes.
- Q The first thing to do is that the company, I take it, should sit down and negotiate an agreement with the United Mine Workers of America covering day rates for all types of

mechanized mining, is that right?

A That's right.

Q Well now, while we are on that, and just so we can understand it, when you say "following the fundamental principles as to wage structure which have proved satisfactory in the United States", what do you refer to when you talk there of "fundamental principles as to wage structure"?

A Well, I mean general ideas as to the relationship between the earnings of skilled men, common day labor, outside labor-- general relationships.

Q And may I take it reflecting in the day rate the net result in dollars and cents of the previous method? You are not suggesting decreases?

A There are certainly classifications that are undoubtedly securing a much higher wage than other men. There is quite a spread.

Q Oh, I think we can all understand that, and I think my friend will not mind if I suggest that I know that both he and I belong to a classification that get more than a proportion of the national income.

BY MR. FORSYTH: You are referring to Mr. Frawley?

BY MR. COHEN: Oh no, my friend Mr. Forsyth sins in that respect.

When you talk of negotiating an agreement covering day rates for all types of mechanized mining and following the fundamental principles as to wage structure which have proved satisfactory in the United States, do I understand that you are doing anything more than suggesting there that the same relationship be maintained between one classification of labor and another when your tonnage rates are translated into day rates?

A No, I don't mean that at all.

Q What do you mean when you talk about fundamental principles as to wage structure that have proved satisfactory in the United States, because you are not suggesting, are you, that decreases have their virtue in the development of the

wage structure in the United States, or have proved satisfactory?

A Well, there have been tonnage men in the United States prior to mechanization who received very high wages and when they went to a day basis they took a lower wage rate on the average.

Q On the average and in some cases. I mean that is not the principle you are advocating?

A What I am talking about is having a uniform wage scale for all classes of work.

Q When you say uniform, what do you mean by that? Uniform as to all classifications or uniform in the sense that there will be a proper scaling between one classification and another?

A That's right.

Q And that, you tell us, has proved satisfactory in the United States?

A I think so.

Q I am not quarrelling with that, and I don't know that we are quarrelling with the suggestion that it be put in force here. Certainly one feature of this fundamental principle is the principle of portal-to-portal pay, isn't that right?

A Well, I am not discussing that at all.

Q Well, I am asking you.

A I am not answering that.

Q Why shouldn't you? Isn't that a fact that one of the features of the fundamental principle of the wage structure in the United States is portal-to-portal pay? Isn't that right?

A That is a recent change in the scale.

Q Oh well, so is the atomic bomb, but it certainly had an influence on the situation. We are not here, are we, just paying respect to tradition? That is in fact one of the principles of the wage structure in the United States? Now that is only a factual matter that I am asking you about, that is that portal-to-portal pay is observed?

A That is the present practice.

Q And it is the law in the United States, isn't that right?

BY MR. FORSYTH: I don't know if this witness has got to give any evidence on what the law is.

BY MR. COHEN: I don't know why not. I have heard lawyers express opinions on engineering questions. Isn't that a fact, that it is the law in the United States?

A I don't know.

Q Do you know that it is expressed in a statute?

A I know there is a statute and I know there has been a great deal of litigation about it, and I don't know that the end has been reached.

Q Suppose I suggest to you that it at least has reached the end of being confirmed by the Supreme Court of the United States? That is pretty well the end, isn't it, so far as litigation is concerned? Would you accept that?

A Why, yes.

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Q. Would you accept that?

A. Why, yes.

Q. Then can we just close on that note, and I don't know why we had to get into a discussion about it, that portal to portal pay is a feature of the wage structure in the mining industry of the United States observed throughout the industry, coal and otherwise. Is that not right?

A. I don't know.

Q. Well if the Statute is in fact good and lived up to, that is so, the portal to portal pay is being observed?

BY COMMISSIONER MORRISON - I think it is part and parcel of the agreement between the mine workers and the coal operators of the United States.

A. It is, but as to the others, I don't know.

EXM. BY MR. COHEN (continued)

Q. Have you since that Statute came into effect, been in contact with any company which, in respect to its wage structure, did not observe the portal to portal wage principle?

A. The Metal Mines have been, the ones I have been working with.

Q. Well is it fair to say you cannot think of any company that is not observing portal to portal pay as a part of the wage structure?

A. I don't know of any.

Q. Well now would you mind if I just went through your brief somewhat in sequence. I open with page 4 where you open with a general statement, and you state there "The extent of the productive coal measures" - is that a term "coal measures"?

A. Yes.

Q. "The extent of the productive coal measures in the Cape Breton Area has been the basis of careful studies by qualified geologists and geological surveys for many years" Is that so?

A. Yes, Sir.

Q. What do you base that statement on?

A. Well I have seen a good many of the geological survey reports and records.

Q. Does the fact that you have seen a good many reports and records amount to the situation that you describe here, namely: "careful studies by qualified geologists and geological surveys for many years" of that field?

A. I don't quite understand your question. Will you repeat it please.

Q. You state here that "The extent of the productive coal measures", what do you mean by that term?

A. We mean the formation in which the coal bed is of workable thickness, what we call productive material, introduces the commercial side, of workable thickness occurs.

Q. That being so and fairly well understood between us, I understand you to be going on to say that there has been a careful study of the extent of these potential reserves or tonnages. Do you suggest that?

A. Yes sir.

Q. Of the complete extent?

A. Yes sir.

Q. Would you mind just telling us of some geological study, or refer us to some survey other than the one or two mentioned here, that does go to the direction of exploring the extent of the possible tonnage in Cape Breton? You mentioned Bell and one or two others.

A. I do not have the list of the geological survey reports and the studies that have been made, but I know from looking over the files that these fields have been studied for many many years.

Q. Which files?

A. The libraries at Ottawa and Pittsburg and other places. Quite a series of publications that have been made through the years.

Q. That would only tell you that studies have been made, but not that those studies go to the question of the full extent of the tonnage available. Would any of those studies suggest that to you?

A. It does not say anything about the tonnage available; the probable extent.

Q. You don't say probable. I took the term "the extent" to mean

the extent, which is something assertive. The probable extent is a different thing entirely.

A. I don't know whether you mean the extent of the field. It is the lateral extent of the field and we do know that that is bounded on one side by a series of rocks and on the other side by the ocean, and as for as the submarine areas, we don't know and can't until we get down under the sea and find out.

Q. Then it refers to the geographical limitations?

A. Yes.

Q. So many miles from one point to another?

A. That is right.

Q. Because even as to one mine, we were told during the course of the evidence by the General Manager of the Dominion Coal Company that as to the Mullins seam for instance, which is only one, and Mr. Frawley asked - "Q. You say nothing is known of the behaviour of this seam at depth? A. No. Q. Could you drill? A. It could be, but the results on the surface were not very encouraging shall we say to put it mildly, and we have not had any occasion to do any work of that nature at the present time, and have not done any prospecting on it." That statement would not surprise you?

A. No.

Q. And it might apply to many seams in this geographical area you spoke of. Is that a fair assumption? Of many seams, that nothing is known of the behaviour of the seam at depth, and you cannot take the actual extent of what coal may be available within those geographical limitations?

A. They don't know anything about the sulphur content of these lower seams at depth.

A. I am not talking of the sulphur content, but of the amount of the mineral itself. That is an unknown quantity, is it not?

A. The marketability of the coal is very definitely dependent on the ash content and the sulphur content.

Q. We are all agreeing with you on that, and we have an expert on markets here. But I am asking as to quantity, confining ourselves as to the extent of quantity and for the moment overlooking the

extent of marketing?

A. The quantity does not amount to anything, but whether it has commercial value.

Q. But for the moment I want to know if we cannot agree that the quantity itself is not known irrespective of quality. That is so, is it not?

A. I would agree with you answering that it is not known, but if you determine that the coal there is of no commercial value no one is interested with whether there are five/^{million}tons or forty million tons.

Q. That may be, but in time we may get to that discussion. I can't eat a seven course meal in one gulp, you know. I am dealing with the matter of quantity, and I want to make clear that the quantity itself is not known. I am not discussing commercial quality, are we clear on that?

A. No.

Q. But that the quantity is not known?

A. You first of all have to define coal. If it is something that is 10% or 20% ash.. At what time does it have a potential value?

A. When there is a market for it.

Q. Is that it. Then we go back again to the market or social use of it.

A. It is strictly an economic proposition.

Q. And assuming that there is some economic reason for using whatever tonnage is there, is it correct to say now that nothing is known about the quantity of the coal?

A. I will agree with you on that.

Q. And it is equally impossible to say how much of that tonnage would, even within your terms of what is commercially recognized coal, that even within the terms of that distinction it is impossible to estimate the amount of that?

A. We don't know, no.

Q. Because as I read the opening sentence I thought there perhaps

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were sources of information that had not been brought to our attention. Then you go on to say: "The quality of the coal in the several beds has been determined by numerous tests by qualified persons", who are those qualified persons and what are these numerous tests?

A. The geological surveyors, the Department of Mines, the Coal Companies themselves.

Q. That is as far as you would want to go in identifying the term "qualified persons"?

A. That is right.

Q. Do I understand it that you are asserting that all of those individuals fall within the category of qualified persons?

A. Yes, that is what I would call qualified.

Q. Qualified to what?

A. To take samples and make tests in the laboratories to determine the commercial value of the coal.

Q. That is one of the things? What else?

A. The normal analysis of coal.

Q. Outside of breaking it down to its chemical components and of deciding in their opinion the commercial value of the coal, what qualifications do you suggest appertain to any of these persons who made these numerous tests? Is there any other?

A. No.

Q. Now your whole document, in a sense Dr. Young, is it not pivoted shall I say on the proposition that coal can and should be taken from these areas is so far as there may be a market profit as a result of doing so?

A. Yes sir.

Q. That is a fair description of your brief?

A. That is right.

Q. And by market we are both using and referring to the ordinary conventional term, that is where you buy and sell?

A. That is right.

Q. I take it there is no quarrel between us by the principle

suggested in the opening portion of the Union brief, that coal is an essential and basic commodity in an industrial economy?

A. I agree with you.

Q. Probably the most basic?

A. It is one of the most important.

Q. And do you mind if I suggest just for a moment that you consider yourself transported from Pennsylvania, not only temporarily to make this investigation and help us in the way you are, but that you are residing here and are going to continue to be a resident here, and your life and the future of those that are dear to you depends upon this political entity, shall we call it. Do you mind if I for the moment assume you are here..

A. I would be very happy to be a citizen for the next few minutes, or as long as you wish me to stay.

Q. We are a little more generous when we offer citizenship, it is not measured in terms of minutes, but we will assume that you are here indefinitely.

A. All right.

Q. And you look healthy enough to warrant that assumption.

A. Yes.

Q. And have had a nice rest for a week-end. And you being here as a permanent (insofar as any of us can enjoy the word permanent) resident of this Dominion, and knowing as well as I do that coal is one of the most important commodities in our industrial economy, what would you as an expert, assuming that you had acquired all of the knowledge that you now have and are making use of that knowledge in Canada and advising Canada, what would you say would be their policy with respect to the source or sources that they should develop or look to for that essential basic commodity?

A. I would naturally think that the resources of the Dominion itself would be developed if possible.

Q. You hedge that very nicely, like the girl who said "because".

A. For example if someone wants metallurgical coal or coke and you have not got it, you can't do anything about it.

Q. Assuming we have somewhere in the Dominion, coal of a quality which can be used by railways, industries, and domestic consumers, and you as an expert and a Canadian are advising as to Canada's coal policy, what would you say we should do with respect to securing or making secure the source or sources of our coal supply?

A. That is rather a broad question.

BY MR. FRAWLEY - That is pretty well the commission issued by the Governor General in Council to this Commission.

EXM. BY MR. COHEN (continued)

Q. Perhaps so, but Dr. Young is here with all sorts of opinions enunciated in the brief, particularly related to the markets, etc., and I am asking you what you say we should do with respect to our coal policy, having regard to the fact that there is situated somewhere in the country coal of a quality that can be used by railways and industries, what should we do with respect to developing the source or sources of that coal supply?

A. I am not familiar enough with the economic policy of the Dominion of Canada as to freights, subventions and tariffs and so on, to be able to discuss that.

Q. I am not suggesting that you confine yourself to economic considerations, unless you want to. I am asking you as a Canadian what you would do with respect to insuring the supply of coal to itself, and having in mind that coal deposits are to be found in some places in the Dominion. And if it assists your thinking, having in mind even that these coal deposits are placed some distance from the large centres of population?

A. I don't think I am qualified to discuss all these related economic questions as to transportation, and the suitability of coals for all the different markets, and the availability of, shall I say national resources to carry the burdens of some of these matters. I don't feel I am qualified to discuss this

matter.

Q. Then why do you pivot your whole brief on the market basis in determining what amount of coal should be mined in the Maritimes? You assume that responsibility.

BY MR. FORSYTHE - He is not saying how much coal should be mined.

BY MR. COHEN - But he has agreed with me that that was the basis of the whole brief.

BY MR. FORSYTHE - He said it was the marketability of the coal.

EXM. BY MR. COHEN (continued)

Q. That being so, I ask you Dr. what Canada should take into account in determining what it will do as to arranging or securing coal supplies, what would you advise as a Canadian and an expert?

A. I can't say anything more than I have. I would surely try to develop the coal resources of Canada to a limit, but there is an economic policy that the Government must decide for itself.

Q. When you say to a limit, you mean I take it to the limit that the nation would feel it could afford to and should develop that resource.

A. Yes, in general.

Q. And that it is a matter for the government?

A. Yes.

Q. In general you agree with my assumption of what you said?

A. I agree it is a matter of government policy.

Q. Based upon a determining of the amount of coal that Canada should make sure of out of its own resources, having regard to all the factors, cost and distance and so on?

A. I think I agree with you on that.

Q. But you will agree that no place is allowed for that consideration in any of the proposals made here?

A. No sir.

Q. That is every time you propose mechanization the market determines the application of the proposals, and similarly as to everything else you propose here?

A. That is right.

Q. So you have not gone into the question except from the market, buying and selling, angle. That is fair enough, is it not? And the technical program related to that?

A. I have approached it primarily from the technical side without considering any extension of markets. I have considered the markets available in 1939, just the over-all tonnage in 1939.

Q. And have related your program to market considerations?

A. To that market consideration.

Q. The 1939?

A. Yes.

Q. And have you anywhere, in any one of your proposals suggested that anything but the ability to market the coal properly should determine the application of the proposal?

A. I have not considered anything about subsidies or subventions or anything of that sort.

Q. That you have left to the people of Canada?

A. I have left to the Commission to make its own recommendations on it.

Q. You have gone into social considerations to some extent, and, speaking personally, I think in a sentence well expressed at the end of page 6 - "The self-respect of the community", and I take it by "community" you are not just referring to the local community?

A. No, any community.

Q. A community co-extensive with the political entity involved?

A. Yes.

Q. And if we are dealing with Canada, it is the political entity of Canada that is involved?

A. That is right.

Q. "The self-respect of the community in its desire to improve continually the standard of living of its people is challenged by any program that is submitted fairly and reasonably." Have I read correctly in quoting you?

A. Yes sir.

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Q. Eliminating for a moment what might be a contentious item with you, because I know nothing of your political point of view, the question of public ownership, is the program put forward in the brief of the U.M.W. one of which one could say it is submitted fairly and reasonably, to use your language?

A. Well it is probably submitted fairly and reasonably by the U.M.W. and I might not agree with them as to public ownership.

Q. I eliminated that.

A. I might just as well state it now.

Q. I don't mind if you wish to put yourself on record as opposed to public ownership.

A. I assume it was submitted fairly and reasonably, and I have no quarrel with it.

Q. Eliminating that proposal in the brief, can you agree that it is a program submitted fairly and reasonably?

A. I presume it is.

Q. Why do you say "presume"? Can you say it was, or can't you?

BY COMMISSIONER MORRISON - Has he read it?

BY DR. YOUNG - I have not read it all. I was not here when it was submitted as a whole.

EXM. BY MR. COHEN (continued)

Q. You have a copy of it?

A. Yes.

Q. You have made some attempt to examine it?

A. Yes.

Q. You would certainly want to know what was in it so as to be sure everything you were putting forward was being put forward fairly and reasonably?

A. That is right.

Q. So you examined it sufficiently to enable you to test it that way?

A. Yes.

Q. And can you agree with me that it is a program that is submitted fairly and reasonably?

A. I think so.

Q. And so it follows that "The self-respect of the community in its desire to improve continually the standard of living of its people is challenged by any program that is submitted fairly and reasonably"?

A. That is right.

Q. And certainly the desire to improve continually the standard of living of its people must as its starting point commence with the employment of its people. Is that right?

A. Yes.

Q. And in the course of that employment paying them such wages as will assure them such income, and giving them such conditions as will enable them (to use your own language) to improve their standard of living?

A. That is right.

Q. You make a reference on page 7 to the "present critical situation in the British coal industry". What do you mean by present critical situation in the British coal industry?

A. Are you familiar with the statutes that have been made there by their British Ministry of Fuel and Power. I had better not put it that way.

Q. I don't mind you putting it that way, if you will agree in advance not to expect part of my fee for today.

BY COMMISSIONER MORRISON - Dr. Young is not an optimist surely.

BY DR. YOUNG - The British Ministry of Fuel and Power was confronted during the War with the problem of increasing their production per man, and were faced with increased costs, and reduction in production.

EXM. BY MR. COHEN (continued)

Q. As we hear was said to be the case in Nova Scotia, and particularly in Cape Breton.

A. Well it has declined here also, and I happened to be in Great Britain last fall and did some work with the Ministry of Fuel and Power at the request of the American Embassy and am more or less acquainted with the concern they had over the decline in

production and increasing costs, and that is what the word "critical" there meant then, and is continuing.

Q. I was rather concerned with the word "present" because I read this brief on the basis of the date on its cover, Sept. 12th.

A. The conditions that prevailed then still exist to the best of my knowledge.

Q. They declined per man per shift production. Is that it?

A. Yes sir.

Q. So far as the British coal industry generally is concerned, I think you will agree quite readily that it has had its troubles for many years?

A. Yes sir.

Q. And that most of those troubles have arisen out of the fact that it was impossible to develop any central or even regional control or administration of the industry. Has not that been their trouble in Great Britain?

A. I think they have had a number of troubles.

Q. Has not that been one of their troubles?

A. They have had more centralization on marketing of coal than in the United States, I think.

Q. I am not talking of the marketing, but of the producing. Marketing has nothing to do with tonnage.

A. They have had a great many more operations considering the total tonnage, than in the United States; The size of the operation has been complicated by diverse ownership, and within a year or two the government has taken over the coal in the ground.

Q. And more and more the tendency in Great Britain and the cure being put forward, financially and otherwise, was to bring about a greater measure of regional and central administration?

A. There has been a striving for that, yes.

Q. And to the extent that they have succeeded not only in striving for that, but in achieving that goal they have improved

the industry.

A. I don't know whether they have improved it or not.

Q. Have they succeeded in developing regional or centralized control at all outside of taking over ownership rights on coal underground?

A. It is my impression, but I don't profess to know very much about it; But it is my impression that most of the controls developed over there have been simply war-time control.

Q. But it has been in the direction of regional or centralized control?

A. There has been the desire for that, but I don't know whether it has been done independently of war controls or not.

Q. But it was advocated long before the war?

A. Yes, but I don't know whether it was accomplished.

Q. Advocated by who for Great Britain?

A. By the Labor Party.

Q. Do you mean to say it was only advocated in Great Britain by the Labor Party.

A. I don't know.

Q. Well on page 7 you have gone to some lengths in discussing a situation that you say now you don't know much about - "The present critical situation in the British coal industry has been studied by leading British mining engineers and they agreed on a program of modernization and mechanization."

A. Yes sir.

Q. Mechanization we know. What is modernization?

A. Modernization refers to the plant side and not to the administration side.

Q. To the what side?

A. The mining plant, the equipment.

Q. And do you suggest that that is the only program that is either referred to on page 7, or that was advocated by leading British mining engineers and agreed upon?

A. That was their program, Sir.

Q. And nothing beyond that?

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A. They didn't go beyond that.

Q. As to regional planning? Pooling? Why their very wage rates proceeded on that basis.

A. I am talking of a certain specific technical report, which I will be glad to show you.

Q. What is the report?

A. It is the report of a committee made up of leading engineers selected by the British Ministry of Fuel and Power. It was the answer of the British people to the criticism that developed because an American man on mechanization was asked over there to find out why they were not doing better with American machinery that they put in. That man went over and made a confidential report, which I understand called a spade a spade and was a real challenge to the British technical group, and the Government appointed a group to find out..

Q. And they said a spade was a shovel.

A. This report is the British engineers' very frank estimate of their own critical situation. It was their report to their own Government of their findings.

Q. I want the date of it.

A. I have not it here, but I have a copy of it at the hotel.

BY DR. HOWLAND - It is dated March 1945.

EXM. BY MR. COHEN (continued)

Q. When you say in the same paragraph and on the same page - "The new British Government has pledged itself to rehabilitation of the British coal mining industry." What do you refer to there?

A. I am talking about the technical side. The British Ministry of Fuel and Power had made this recommendation to the Government, and then you have the change in the government, and according to the editorials in the British papers the new British Government says they are going to carry out the recommendations made by this technical Advisory Committee as rapidly as possible.

Q. In the report you have just spoken of?

A. Yes.

Q. And that is what you mean when you say here that - "The new British Government has pledged itself to rehabilitation of the British coal mining industry."

A. That is what I mean.

Q. You avoided any reference to public ownership, or to the equally clearly announced policy of the new British Government of public ownership?

A. As an engineer I was interested as to whether the program on technology was to be taken into the public ownership plan, and I am delighted to know that the British engineers will have a chance to put into effect in this government what they had recommended under the other Government.

Q. And I am sure you are more friendly disposed towards those at least in Great Britain, where they do show that hospitality to the reports of technical experts, or are you still unfriendly?

BY COMMISSIONER MORRISON - He didn't say he was unfriendly.

You are drawing an inference there that he was unfriendly? I don't know that, he said he was.

BY MR. COHEN - I thought I heard him say he was opposed to public ownership, and was very anxious to make that clear.

BY COMMISSIONER MORRISON - He might be opposed and still be friendly.

BY DR. YOUNG - If you wish me to withdraw that statement, I will.

BY MR. COHEN - Which? That you are opposed to it, or a little more friendly.

A. No, I will withdraw that I have not been supporting public ownership.

Q. I don't want you to withdraw anything at all that will interfere with your conscience. I understand that you are withdrawing the statement that you are opposed to public ownership?

A. I am not withdrawing any statement then.

Q. You quote from that report, and I see here the date is given, March 1945, the Miners case for the British National Union of Mine Workers. You close the quotation at the end of that page by stating: "In addition to the training of entrants

there should be a national scheme for the training of miners to undertake all forms of work at the coal-face." And I take it you are quoting it with approval?

A. Certainly.

Q. And that should be a feature of any rational approach to the problems of the coal industry?

A. I approve of the educational programs which have been presented here and in Great Britain.

Q. What do you mean by "here"?

A. I understand there have been programs presented from time to time to the coal industry of Britain, and I understand they have been carried out fully and successfully.

Q. You are referring to a national scheme for the training of miners to undertake all forms of work at the coal face?

A. I approve of that.

Q. That is an essential feature to any rational approach to the coal industry?

A. I agree.

Q. On page 8 of your brief you go on and state that certain questions must be asked by the mining engineer or certain assumptions must be made, and you go on to say, among these questions are the following: You then set out seven questions.

Do I understand that these are questions that you address to someone?

A. To myself, and where I can get answers, I get answers; not quoting anybody.

Q. You say they are questions addressed to yourself and where you can get answers, do you mean from yourself?

A. Partly from myself, and others.

Q. To whom did you address them?

A. To the officials of the Dominion Company and some of the other coal companies.

Q. Anybody else?

A. No.

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Q. The first question is: "What quality of coal from this field can be sold in the post-War period? Did you ask yourself that?"

A. No, some of the Sales Department.

Q. And you say the answer given to this question was, "The same quality we sold in 1939".

A. That is right.

Q. That is a direct quotation of an answer that you received?

A. That was the consummation of the answers from several people.

Q. It appears here in quotations and I took that to mean that you were taking it from some formal answer to that question.

A. No, it is from several. It is the type of answer that was given me, that they could sell the same type of coal that they got in 1939.

Q. Who told you that?

A. The representatives of the Sales Departments of several of the companies.

Q. You would not want to go into any more particulars?

A. I would say that any of them I asked told me that.

Q. Then the second question - "What tonnages of this quality of coal can be sold in the post-War period? Did you ask yourself that question?"

A. Yes, and other people,

Q. Who else?

A. The same sales people, how much coal will you be able to sell in your zone.

Q. The sales people of the Dominion Coal and other companies?

A. Yes.

Q. Then you have a statement here - "This question cannot be answered completely at this time."

A. That is right.

Q. Does that sum up the answers you received?

A. Yes.

Q. From these various sales representatives?

A. Yes.

Q. Of these various coal companies?

A. Yes. It is tied in with the next question.

Q. Then you say - "What prices will control in the competitive markets?" Did you ask yourself that?

A. No, I asked other people. I would have no way of knowing.

Q. I think you told us you were not interested in the economics. Here is a question - "What price will control in the competitive markets?"

A. Before you follow that, I want to say if you are going to open a new mine or field you have to find out if you can sell the coal.

Q. Or use it?

A. All right. You have to find out if you can produce that coal at a price which will warrant you selling it in that particular field, and how much money it will take to open the mine; are you justified in the investment? I asked myself all these seven questions and I want to insist that these questions are all tied together. Can you make money out of the thing?

Q. That is what I want you to be frank about, because you told us earlier that you didn't go into the economics of the question, that you only made a geographical survey and study. Now you say it was on the basis that you now enunciate, can you make money out of it?

A. I say that any program of mechanization or modernization must be based on the proposition that it is sound from a business standpoint.

Q. And by that phrase you mean (using your previous language) that you can make money from it?

A. That is, the best thing for the country, and the Company, the coal consumers and the tax payers. It is a business proposition all around.

Q. That makes it a business proposition. What is the factor, or what are the factors that make it a business proposition? You said before, making money. Is that the factor?

A. You have asked several questions. I will answer them if I can.

Q. You used the expression before that all of these proposals

were based upon the proposition that opening or producing from a coal mine had to be a sound business proposition?

A. That is the way I approached it.

Q. I ask you, what makes an enterprise a sound business proposition? what is the test?

A. The money invested in the coal in this instance, the owner is not to be considered possibly, but if you want to consider the owner, all right. The money invested in the plant must be returned to the investor within the life of the property, with a reasonable rate of interest, and with some reward for the risk he has taken in going into the business.

Q. I just want to be quite clear that that is your indication and your explanation of what is a sound business proposition.

A. Yes sir.

Q. And the proposals which you have made in this brief are made in relation to the factors and formulae that you have now indicated?

A. Yes sir.

Q. And that is what you meant when you asked yourself and others what prices would control in the competitive markets?

A. Yes.

Q. What are the competitive markets, where you buy and sell?

A. Yes.

Q. Who are the competitors? In relation to the coal of the Maritimes, who are competitors going into that market offering to sell?

A. In the same markets where the Maritimes would sell their coal, you mean?

Q. Yes?

A. Eventually it may mean all of Europe as well as the United States. I am talking of the post-War situation, and the chances are you will have European coal to compete with the same as the United States coal.

Q. If it comes in?

A. They will compete in the markets if shipping is available.

Q. And if permitted to compete?

A. Do you mean due to tariffs?

Q. Due to a national policy which will say we are going to make use of a certain amount of our coal resources. That would interfere with the freedom of that competitive market?

A. Yes.

Q. And that is a program of whether or not you approve for a society or community to adopt?

A. Yes.

Q. And when you ask what prices will control in the competitive markets, you are only dealing with the buying and selling and profit factor?

A. That is right. But..

Q. Do questions 4, 5, 6 or 7 refer to anything but the competitive market profit making factor?

BY MR. FRAWLEY - Dr. Young had something to add to his last answer.

BY DR. YOUNG - Answering your question first. My approach to this has been entirely the profit motive.

EXM. BY MR. COHEN (continued)

Q. I do not think it would be fair to labor you further on that point.

A. Oh yes it would be.

Q. I mean fair to labor the point with you. You have put the whole thing in a nutshell. You have called a spade a spade, so we need not go into the details.

A. The reason I had question 3 there, I say: "This question also cannot be answered at this time for the answer depends very largely on whether there will be a system of price-control in the bituminous coal mining industry of the United States.

Q. Yes you go into the political, social question involved in the possibility of a price-control system prevailing in the bituminous coal mining industry of the United States, but you give no consideration anywhere in this brief to any political or social policy which may affect or have an influence upon the use of coal out of Canadian mines.

A. I had it in mind, but it was not my purpose to discuss it.

Q. The only reference you make to anything that could be said to be of a social or political character is this reference to price control system that may prevail in respect to the bituminous coal mining industry in the United States.

A. That is right.

Q. When you say on page 9 - "The problems of Cape Breton submarine mining already have been presented to the Commission and discussed at length." What had you in mind when you made that statement?

A. I referred to the submissions that have been made particularly by the Dominion Coal Company, the physical conditions, I forget the numbers of the various exhibits.

Q. Do you mean the document put in by Dr. Gray?

A. Primarily by Mr. McColl. By both Dr. Gray and Mr. McColl.

Q. That is the basis of that statement?

A. Yes.

Q. I just wanted to know because it is a rather sweeping statement. And it is a fact that you say here, and I am reading from your brief at page 9 - "there is probably no other submarine coal-mining field in the world covering such a large area and on which the future of such a large community depends." That is a fact?

A. I think that is correct.

Q. And consistent with the profit basis of your approach, the future of this large community depends upon their ability, or the ability of coal coming from this area to sell profitably on the competitive market. That is what the thing amounts to, is it not?

A. That is right.

Q. Now you quote Mr. McColl on page 10, in which Mr. McColl indicates or suggests - "The future is not expected to bring problems which, from an engineering standpoint, might prove insurmountable. The economic aspect is altogether different from that of pure engineering; it will set the limit (distance from the

"shore line and dopty) to which the field will eventually be worked." That is the end of the quotation, and then you say, with this statement I agree.

A. Yes.

Q. So we are clear then that there are no problems which are likely to prove insurmountable from an engineering standpoint?

A. Right.

Q. And the problem is, as Mr. McColl puts it, the economic one. Is that it?

A. Yes sir.

Q. And you go on in your own text and say, and I want to be sure we are clear about that - "The engineering problems can be solved if additional capital is available and if markets can be found for the product, considering the necessary costs with efficient operation." That is your statement?

A. That is right.

Q. And you adhere to that statement?

A. I do.

Q. That is, that the engineering problems can be solved?

A. Right.

Q. Given adequate capital and a sufficient use, or quantity of use for the product that would be mined from these mines?

A. Yes sir.

Q. Have you given any thought to the amount of this additional capital that would be needed to solve these engineering problems which you say can be solved?

A. I have given thought to it. As I state later in the report it would take a staff working very carefully for some time to work it out.

Q. Have you been able to arrive at any conclusion at all as to the approximate amount of that additional capital?

A. I have not.

Q. And were any of the company officials with whom you discussed that, able to give you any figure or assist you in arriving at an estimate?

A. I didn't ask them.

Q. You didn't ask any officials or representatives of the Company, although you were asking them about the amount of coal that could be sold in the competitive market, and so on, you didn't ask any official as to what additional capital would be needed to deal with the engineering problems, or for any approximation of that additional capital?

A. I would say no to that question. I didn't ask them for those figures because as an engineer I know that guesses, fantastic guesses would be foolish, and I know that to sink shafts 4000 feet and drive out the sea with adequate air force and provide the necessary hoists - I have shopped around with some of the biggest contracting firms in the United States and I am trying to get together just for my own information (not for submission to this Commission) some idea of what a modern gigantic plant of this type would cost; as it has never been done.

Q. That may be right, and you may be the last word on that subject, but it is possible that one person in this company may also have given thought to that; and did you ask any representative of any of these coal companies about the probable additional capital that would be needed to deal with any of the engineering problems which you have referred to on page 10?

BY COMMISSIONER MORRISON - He has answered that three times.

EXM. BY MR. COHEN (continued)

Q. You quote from Mr. McColl, and you say "With this I agree", and then you say the engineering problems can be solved if the additional capital is available". Did you ask any official whether or not any capital was available?

A. I did not.

Q. And certainly not as to the approximate amount?

A. No sir.

Q. What did you mean on page 11 when you stated at the end of the paragraph near the centre of the page - "Careful consideration was generally given to the local manpower problems incident to the effective application of the new equipment and the modernization of the nine plants." Frankly, for one who represents

a community that calls a spade a spade, that seems to be a lot of foolish words. Concretely what is that?

A. This paragraph begins at the bottom of page 10 and relates to bituminous coal mines of the United States. "Careful consideration was generally given to the local manpower problems incident to the effective application of the new equipment and the modernization of the mine plants."

Q. What was this "careful consideration", just what did it express itself in?

A. I could give you half a dozen illustrations in which mining companies putting in mechanization programs in the United States did not dismiss men at all.

Q. I am not suggesting that they did.

A. I thought you were asking me what I meant.

Q. Yes?

A. I am trying to tell you.

Q. But you are doing it in a tone that I am quarrelling with you?

A. I could tell you half a dozen companies at least who have timed their application of mechanical loading, the rate of the application of mechanical loading, so that they would not displace men from their payroll. I can, unfortunately, give you some others who did not so time it, but carefully consideration was generally given to avoid the displacement of men.

Q. The careful consideration amounted to applying the mechanization, or the mechanical loading as a feature of mechanization, at such time and with such moderation as would avoid the displacement of men?

A. That is right.

Q. Is that what you mean by "careful consideration"?

A. That is right.

Q. You refer on pages 13 and 14 to the Fairmont Field. Do I take it that you had some personal experience there?

A. Well I have had considerable experience with it because it is a competitor of the United States, and also a keen competitor I understand with coal produced from the Cape Breton Field. That is the reason for reference to it.

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Dr. L. E. Young

Q. And the first paragraph on page 14 to the effect that -

"It should be noted that the coal sold commercially from the Cape Breton field competes particularly with coal from the highly-mechanized Fairmont Field of Northern West Virginia." Is that based on personal experience?

A. Yes.

Q. You say - "The field has been mechanized for some years, and the labor force is efficient and cooperative."

A. That has been my experience.

Q. On page 15 you make the statement - "In the event suitable mining machines are not now available, it is possible that among the developments in the post-War period there may be mining machines which can be adapted to the requirements of the field."

Only one question and that is, did you discuss that with any official of the Company? I don't mean the exact statement.

A. Yes sir.

Q. And did they tell you of any possibilities with respect to such developments?

A. I don't quite understand that.

Q. You talk here about developments in the post-War period as a result of which mining machines may be made available adapted to the requirements of this field.

A. Yes. I happen to have all catalogues of American coal mining machinery, and also photographs and circulars of all of the British and pre-War German equipment, and I have shown those to officials and engineers of the Company and they have expressed great interest in them, and I think they have had previous information on the same equipment. They had been on the lookout for those.

Q. And did they discuss with you at all any question of the probable cost of such things, and whether or not capital was available for it?

A. I don't know the cost of that European equipment.

Q. Or whether any capital was available to acquire it?

A. No, I didn't discuss that.



Q. You make the statement lower down - "The experience of the Cape Breton field and that of the European submarine fields point to the necessity for long-range planning of hoisting, transportation and ventilation."

A. Yes sir.

Q. Did you discuss that with Company officials?

A. I did.

Q. Did they give you any indication of what their long-range planning is with respect to hoisting, transportation and ventilation?

A. Just as to what size opening you would drive, that is practical, and how much air you could put through it, and things in a very general way.

Q. Nothing more than that?

A. That is right.

Q. Now on page 16 where you refer to the estimates of high grade coal and the statements filed. What statements?

A. I think it is Exhibit 18, Statement of reserves.

Q. Who made the estimate?

BY DR. HOWLAND - The Dominion Coal Company, Exhibit 18.

EXAM. BY MR. COHEN (continued)

Q. Would you mind looking at page 90 on that same subject, where you said - "After inspecting a number of the Cape Breton coal mines, conferring with numerous parties connected with the coal mining industry, and reviewing a large number of pertinent submissions and reports, the following points are presented as summarizing the conclusions reached." I want to ask you with respect to the quotation that I have just read, first, who those numerous parties are with whom you conferred? Not necessarily by name, but if you could in some general way indicate them.

A. I have talked with officials of the Department of Mines at Halifax, and with some of the Government officials at Ottawa.

Q. Which government officials at Ottawa?

A. The Emergency Coal Control, Mr. Brunning and Mr. Neate, and I have talked with the Executives and operating officials I think of all of the coal companies in Cape Breton. I have made it my

business to meet all of them I think.

Q. Anybody else?

A. With some of the local business men. I had a committee from Glace Bay call on me, and I have talked to people generally around the community, and the railway people, and business people I meet on the streets and where I buy things.

Q. Does that identify the numerous parties on line 2 of page 90 with whom you referred concerning these questions which you later indicated?

A. I was here for a good many weeks and talked to many people.

Q. I wanted to make sure you had completed your list?

A. I don't know of anybody else I talked about it to, except people I met on the trains and in the hotels.

Q. And what you have said identifies them all?

A. I have talked to officials of the U.M.W. that I could talk with, and met with some of the mine committee.

Q. What officials of the U.M.W. did you talk with?

A. I called at the office and met the gentlemen there at the time. I didn't single them out.

Q. I am not suggesting you did. You said you talked with officials of the U.M.W. To whom did you talk?

A. I went to the office and talked to the men there.

Q. Do you know who they were?

A. I didn't meet them all at the office. I talked with Mr. Scott once or twice and with Mr. McPhee and some of the other officials occasionally.

Q. Which other officials?

A. I don't remember their names, the President and Secretary.

Q. How many times were you at the office?

A. Perhaps half a dozen times.

Q. In Glace Bay?

A. Yes.

Q. And where did you meet Mr. Scott?

A. Here.

Q. In the court room?

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Dr. L. E. Young

A. Yes, and I think I met him in Ottawa.

Q. He was there on the wage matter, I suppose?

A. I think so.

Q. Other than that casual meeting with Mr. Scott in Ottawa and seeing him here, have you ever discussed things with him?

A. No.

Q. Any discussion with Mr. Freeman Jenkins, the President of the U.M.W.?

A. Not in detail.

Q. I didn't say in detail. Did you have any discussion with Mr. Freeman Jenkins prior to coming to the court room, as to any of the matters discussed in this brief?

A. No.

Q. Did you seek any meeting with the Executive Board of District 26?

A. No.

Q. Did you ever address any communication to them?

A. No, Sir.

Q. Any inquiries?

A. No sir.

Q. Now the large number of pertinent submissions and reports that you refer to in the sentence I read, I take it refer to the documents filed here?

A. Yes sir.

Q. And then, based upon your discussions with the persons you met, and your inspection of the properties, and those submissions, you state as a conclusion - No. 1 "There is a large area and tonnage of high-grade submarine coal remaining, as well as a large area and tonnage of lower-grade coal, both land and submarine." That is a conclusion that you enunciated here, so to speak?

A. Yes sir.

4:40 P.M. HEARING ADJOURNED UNTIL SEPT. 18, 1945.

AT 10:00 O'CLOCK A. M.

ROYAL COMMISSION ON COAL

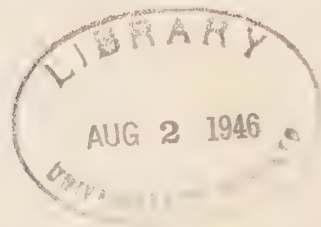
Sydney, N. S., September 18th, 1945.

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Coal Companies in Nova Scotia....Page 3928
- No. 205 - Report re Financial Statements
1930 - 1944, Dominion Coal Co.,
Cumberland Ry. & Coal Co.,
Sydney & Louisburg Railway,
Dominion Rolling Stock Co.Ltd..... 3928
- No. 206 - Report re Financial Statements
1930 - 1944, Acadia Coal Co..... 3928
- No. 207 - Report re Financial Statements
1930 - 1944, Old Sydney Collieries. 3928
- No. 208 - Report re Financial Statements
1930 - 1944, Various Coal
Companies of Nova Scotia..... 3928



ROYAL COMMISSION ON COAL

Sydney, N. S.,
September 18, 1945.

The Royal Commission on Coal convened at the Court House, Sydney, N.S., on Tuesday, September 18th, 1945, at 10 A.M.

PRESENT:

Hon. Mr. Justice C. C. McLaurin, Acting Chairman

Angus Morrison, Esq., Commissioner

J. J. Frawley, K.C., Commission Counsel

J. L. Dubinsky, Assistant Counsel

Robert D. Howland, Secretary

L. A. Forsyth, K.C., representing Dominion Steel and Coal Corporation Ltd.

J. L. Cohen, K.C., representing United Mine Workers of America, District 26

DR. L. E. YOUNG resumes stand. Cross Examination continued by Mr. Cohen.

BY MR. COHEN: It has been suggested that if I move a little closer to you at the table, Dr. Young, perhaps we might be able to discuss these matters with a little more ease.

DR. YOUNG: Do you want me to move?

BY MR. COHEN: Oh no, I don't want you to change your position. Now that so much space has been taken I think perhaps we may have to remain as we are--well taken.

BY MR. FORSYTH: I would be very happy to go over and sit in the place that has been vacated by the other Cape Breton giant.

BY MR. COHEN: I am just afraid of what my friend is going to do to Mr. Wade.

BY MR. FORSYTH: Never mind Mr. Wade; he will get along.

BY MR. COHEN: I want to thank you first of all for your courtesy in sending over this Report of the Technical Advisory Committee of March 1945. I am not so sure that it is going to be returned to you in as good condition as when you sent it over, but it will be returned. Now I was interested in

noticing, and I am sure that you noted it, that in addition to questions that might be well said to be technical and scientific, and in addition to a series of matters appearing under the heading "Commercial", it then goes on and deals with the rights and duties of the mineworkers. Do you remember that?

A I read it some months ago and I remember they did discuss some general related problems.

Q For instance they have a paragraph, paragraph 684, dealing with the question of wages paid by the industry?

A May I get a copy?

Q I'm sorry. I thought you were so familiar with it.

A No, I am not familiar with it. Did you ask me a question with regard to it?

Q I just wanted that confirmed, because in spite of the fact that you asked a question of me yesterday you are the witness.

A They have that. They do not discuss wage rates, as I recall.

Q No, but they do in the final sentence of that paragraph say this: "This, combined with certain other circumstances, leads to the conclusion that wages for underground workers should be at least as high as in other industries demanding an equal degree of skill and effort; and the miner is entitled to look for this." I have read correctly, have I?

A Yes.

Q And certainly in that respect the report is something more than a report of a committee concerned with technical matters? Are we in agreement on that, or does it speak for itself?

A Well, it speaks for itself.

Q Then the next paragraph, "Redress of Grievances". That is hardly within the scope of the things that you suggested yesterday was the sole concern of this committee, namely, technical matters and so on?

A Paragraph 685?

Q Deals with that subject, doesn't it?

- A. Well, it is a general statement in regard to handling grievances.
- Q. And the advisability of handling them properly and expeditiously? I don't want to read the whole paragraph. Isn't that right?
- A. I don't recall the detailed treatment that is given. It is a general statement.
- Q. You have it in front of you and I will just read one sentence if that will help. "Machinery for dealing with grievances already exists, but it is not always properly used." That appears there?
- A. Yes, there is a statement there. You asked me a question in regard to that?
- Q. I just want it confirmed that that is in the report.
- A. Yes, it is in the report.
- Q. And that this report that yesterday we were told dealt only with technical matters, deals with the right of the miner to receive a proper wage rate, and in this paragraph to have his grievances dealt with properly?
- A. That's right.
- Q. "Security of Employment. We come now to the question of unemployment and short-time working. Between the two Wars there was little security of employment, and numbers of unemployed mineworkers were found in most of the coal-producing districts. The responsibility for this lay neither with the employers nor the mineworkers. The present Government has, however, issued a statement of policy, in their White Paper on Employment, accepting the maintenance of a high and stable level of employment as a national responsibility. This acceptance must mean that future Governments will assume a large measure of responsibility for the provision of alternative employment (including, if necessary, re-training) for any mineworkers who may no longer be required as a result of the economies in manpower which the technical reforms we have

recommended are designed to secure." Now have I read correctly from the report?

A You have.

Q And do you think there is anything improper in this committee basing its policy upon this White Paper issued by the British Government in respect to employment?

A Not at all.

Q That is a reasonable proposal?

A Yes sir.

Q Just one other item and then I will be able to return the volume to you. On page 120, dealing with planning, and I will just refer to a short paragraph, paragraph 707, "The approximate output required from a given area, in relation to the output of the country as a whole, should first be decided, the reserves available in the area examined, and the potential production of existing mines and new sinkings assessed." I have read correctly?

A That's right.

Q Now am I correct if I say that that is one paragraph under a general heading, "Planning for Production", which indicates and states quite clearly that planning with respect to the coal industry cannot be based upon considerations arising out of a mine or mines, but must be based upon considerations arising at least out of a given area? Have I correctly described the general nature of Chapter 23, "Planning for Production"?

A Well, I don't recall what all is in the chapter. That is a general statement in preliminary.

Q Well, the statement that I have read at least is one of the features of that chapter?

A Well, there are three headings there, Area Planning, Long-Term Planning, and Operational Planning. The Area Planning is preliminary to the other two.

Q Quite true, and lays it down as the basis of any consideration of planning for production?

A That's right.

Q That is, they should deal with the area, not with individual mines, isn't that right?

A That's right.

Q Now I think you did tell me yesterday, and you will pardon me if I am repetitious on that one point, but if I clear that point up I can perhaps save time in other respects. I think you did tell me, just before we closed last night, as to the source of your figures at the bottom of page 16 where you say, "The estimates of high-grade coal in the statements filed."

A That is, as I recall, Exhibit No. 18, I think.

Q That is an exhibit of the Dominion Coal?

A That's right.

Q And just so that we don't have to return to that item, may we now have it made clear that any estimates that appear in this brief as to tonnage or likely tonnage and so on are based upon statements submitted by officials of the Dominion Coal Company or associated companies?

A I had before me both the estimates of reserves of the Department of Mines of the Province, and the reserves that the geologists estimated and those of the Coal Company, and those of the Coal Company were more specific in dealing with these particular areas, and so this data being before me I used the ones that covered the situation most specifically.

Q I am not quarrelling with you about that. I just want to clear this point up.

A I considered all of them. When I looked at them I took all three of them and sized them up.

Q I am sure we would take that for granted, but where in this document you make estimates you are basing yourself upon statements made by the Dominion Coal Company or associated companies?

A That's right.

Q And where, for instance, on the next page you talk about the practice of marketing and the practice of mixing or blending

the coal you base yourself there upon what?

A That relates to the practice of the Dominion Company itself.

Blending of course relates to any corporation that has a number of mines which has facilities for mixing the coals from different mines.

Q I just want the source. The source is what? One of the officials of the company?

A Well, I went to the very stockpiles and saw the coal being put on the ground.

Q No, you are talking here about marketing practice. What do you base your statement on?

A Based on my observation by going to the mines, and seeing how the coal is unloaded and put on ships, as well as the statements of individuals. I wanted to see what was actually being done.

Q As to the individuals, who were those individuals?

A Well, I went to the docks with Mr. McCall.

Q And anybody else?

A I don't recall whether there were any of the other engineers with us or not.

Q But if there were others they are all officials of the company?

A Yes sir.

Q And again you emphasize on page 18, and it is a short paragraph, summing up what you have said you go on to say, "From the foregoing, it is evident that there is an ample tonnage of submarine coal that can be mined over a long period of years, if efficient production methods and machinery can be employed and continuing markets are available." I have read correctly?

A That's right.

Q So that the question of policy, if I may put it that way, to be determined by the country--you quite correctly indicated yesterday that you were not concerned with that--was just at what point the country would regard the production methods

and machinery as efficient and just by what means the markets will be supplied?

A That's right.

Q And assuming an affirmative decision on the first branch of the question I have put, and that use is provided and ensured of the coal produced here, there is no doubt about the fact that there is ample tonnage?

A I think there is ample tonnage.

Q You not only think but you say so here affirmatively. You say, "It is evident."

A It is evident, sure.

Q We can be sure about that, reasonably sure?

A To the extent that we can estimate the tonnage.

Q We can be as sure of it as you are in your document?

A That's right.

Q And the only question is, what and when can you say methods or production are efficient and machinery is efficient, and what use can we provide for the coal? Those are the only questions that remain to be determined? The source is there?

A As I indicated yesterday, we don't know how far this coal continues to sea. We assume that it goes 5 miles, and with that 5 mile limit we have reserves of 400,000,000 tons.

Q I am prepared to accept your estimate. I just want to make sure there is nothing that qualifies it. You say there is ample tonnage, and we can proceed upon that basis?

A I think so.

Q That rather qualifies the statement, although perhaps not intended to. That is your conclusion as an expert after examination into this subject?

A That is my conclusion, sir.

Q Where you say on page 19, the third paragraph, that "The allocation of the remaining coal area to various developed mines or reserves has received most careful consideration" upon what do you base that statement?

- A There have been various Commissions that have previously reported on this field, and from time to time the areas of submarine coal have been allocated and re-allocated, and competent engineers familiar with submarine coal mining have been brought here in previous years and have collaborated with the provincial and corporation engineers in planning the allocation of these coal fields.
- Q Now would you mind telling us of one Commission report that dealt with the question of allocating the remaining coal areas, to say nothing of giving the most careful consideration?
- A Well, I don't remember the names of the reports but there have been previous Commissions that made specific recommendations on the allocation.
- Q Can you in any way indicate ---
- A I don't know the names of them. I haven't attempted to review those historical documents in full.
- Q As to the year?
- A No.
- Q You don't remember the year or the chairman or the composition of the Commissions?
- A I do not.
- Q But you make statements here that those matters have received most careful consideration?
- A They have.
- Q You can't tell me now what Commission recommendations or what report or what document or what assertion supports that statement?
- A I can get that information for you. I don't have it available at this time.
- Q That is very nice. I would be pleased to see that confirmed. Now at the end of page 20 you say that "Some of the present mines have been in the Third Period for some time and the inevitable conditions which lead into the Fourth Period are now confronting the Dominion and Old Sydney Collieries at some of their mines"?

A Yes.

Q Now what are these inevitable conditions?

A Where they have installed the second stage of hoisting underground and inevitably will have to consider either the third stage of hoisting, the third deep you might call it, or go to a deeper vertical shaft and cross-measure tunnels.

Q Did you ascertain if any consideration had been given by the Dominion Coal Company or the Old Sydney Company to that question?

A I did not discuss with any of their engineers or any of their officials how they propose to tackle the next step.

Q Or if they propose to tackle it? You didn't discuss that with them at all?

A I did not.

Q I am sorry to have to ask you again for source, but these general statements do trouble me somewhat. You say at the top of page 21, "A detailed statement of development work done currently has been reviewed." What do you mean by that, and what is the source?

A Well, I asked the engineering department of the company to let me see a record of the development by years, the feet, the location.

Q Oh, by that you mean that you examined company records?

A I did, sir.

Q Then you say at the top of page 22 that "the Company has made a careful study." I was going to say something about the generosity with which you always add some complimentary term to either a submission or a study, and coincidentally they all seem to come from one source, but that may be a coincidence. You say here that "the Company has made a careful study of ways of reducing this development cost in relation to the total length of walls," and so on. Now what is the basis for that statement?

A I reviewed the history of the longwall mining in this field, with the idea of seeing whether there were methods

with which I was familiar, as being used in other fields, that had not been tried. I secured from the company historical statements as to the detailed steps that were taken in the application of longwall, and this includes the length of walls, the ventilation problems, the transportation away from the walls, the maintenance of the levels, and all of those matters with which I took particular pains to inquire of the management of both Dominion and Old Sydney, and I repeat that I think a very careful approach to this problem has been worked out by the engineering staff and the operating forces as to the length of wall, the spacing of levels, whether they should use advancing longwall or retreating longwall, and when I say careful, if that is the term, I repeat I think they have made a very careful study of the situation.

Q Of that phase of the situation?

A Of the technology of developing the length of walls in relation to the tonnage that can be produced, the haulage away from the walls, the maintenance of the roadways and the operating costs.

Q And that was discussed by you with officials of the company, and only with officials of the company?

A Well, the engineering and operating officials.

Q When I say officials I mean employees of one level or another?

A Yes sir.

Q Now you suggest on page 25 under the general heading "Mine Plants" that the equipment observed by you was in good operating condition or was being taken care of by trained maintenance men, then you go on and say, "In general, the underground equipment being used was well-adapted to the work being done, except as to some of the mining equipment now operated by compressed air which should be electrified and certain haulages where it is now being planned to replace rope haulage with electric locomotives." Now first of all as to the mining equipment now operated by compressed air which in your opinion should be electrified. Did you discuss

that with officials of the company?

A Yes.

Q And what view did they express?

A I think they agreed with me that electrical machinery would be more efficient.

Q Well, but did they go so far as to agree with you that it should be installed, replacing the present equipment?

A Well, I don't remember specific instances. In general it was agreed that electric coal cutters would be used wherever the ventilation would be adequate to permit the use of electrical machinery.

Q All I am trying to find out is whether as a result of your discussions with officials of the company you ascertained that they planned to replace this equipment now operated by compressed air with equipment that is electrical?

A I understand they intend to wherever conditions permit.

Q Did they indicate the extent to which in their opinion conditions permit such replacement of equipment?

A No, they did not.

Q And you didn't inquire?

A No sir.

Q Or you can't tell us anything about the extent of the project and its probable cost?

A No sir, I cannot.

Q Now as to haulages, to replace rope with locomotives. Was that discussed with officials of the company?

A Yes sir.

Q And what were you told by them about that?

A There were several mines where they indicated they were now driving roadways that will be electrified, replacing the rope haulage.

Q What mines?

A I think No. 4 was one of them.

Q Any others?

A I don't recall any without referring to my notes.

Q Well if in fact there is data in your notes and work sheets and so on that suggests that some other mines should be added, you can tell us about it later?

A I can.

Q And unless you do, then we may take it that you were only informed as to mine No. 4?

A I don't know about that.

Q Well, it is one or the other. If you were informed as to the other mines will you tell us about it later? I am not pressing for it now.

A All right, I will try to look up the information. I didn't tabulate every detail of every mine, what was suggested or that this was mentioned only at one place.

Q I know, but here is a point where you say that with these two exceptions the equipment is well adapted to the work being done. Now surely before you would, so to speak, take exception to the present equipment you would satisfy yourself, firstly that the observation was proper, and secondly as to what the company had in mind about it. That is reasonable, isn't it?

A Yes, it is.

BY COMMISSIONER McLLURIN: What you will do, Dr. Young, is look up your notes and sometime give Mr. Cohen any additional information.

BY MR. COHEN: Thank you very much. Then at the bottom of page 25 you talk about increasing the capacity of mine cars up to 3 tons by the installation of side boards. Was that discussed with the officials of the company?

A It was.

Q Which officials?

A Well, I don't know which officials were with me at No. 25 Mine. I know I discussed it with Mr. McCall and the district engineer and several of the local men.

Q And did they indicate when that program was going to be carried out, or if it was going to be carried out?

- A May I explain, sir, this mine is now operating as a hand-loading mine and it is necessary to use low height cars so that men can shovel the coal over the side of the car. So long as that method is followed you need low height cars, and no change would be made to the 3-ton car unless the hand-loading is discontinued.
- Q Well, assuming all that, and I take it that all that was discussed by you with the company officials or managers or employees or however you would describe them--that was all discussed with them?
- A Sure.
- Q Taking that into account, was anything indicated to you as to when this program of installing cars with a high capacity would be carried out?
- A If this mine is mechanized you would use 3-ton cars. If you continue hand-loading you will use 1.1 ton cars.
- Q Were you told anything at all about the probable mechanization of Mine No. 25?
- A I was not; as to specific dates or times I was not.
- Q So you don't know what program they have there as to mechanization of the mine and as to when, if at all, the cars of larger tonnage will replace the present cars, is that right?
- A I do not.
- Q Now you deal with the same subject on page 26 and you refer to the fact that "the increase in the capacity of mine cars cannot be undertaken without great expense at most of the mines." Now did you make any estimate of the expense?
- A I did not.
- Q Well, how can you say it would be great? What is great?
- A I know it would involve in a mine that was now equipped with cars 3 to $3\frac{1}{2}$ feet wide, operating double track, for necessary clearance if you are going to go to a car 5 feet wide, for example, it would mean either a change to a single track haulage or widening all the roads. All of those things would involve serious expense.

Q What is serious expense? You have now substituted the word "serious" for the word "great", and I don't know that the rest of us just quite know what is involved in the terms "great" or "serious". The Government of Canada and in the first place this Commission may be interested in knowing what is "serious expense".

A Well, if the Commission desires me at a later date to prepare preliminary estimates I shall be glad to do so. I have not had the opportunity or the occasion to prepare them for this occasion.

Q Can you now in any way indicate, even in approximate terms, what this expense is that you say will be great expense?

A I cannot.

Q If you can't do it, you can't. Now again on page 29 you talk about certain problems having received attention, in this instance the problem of roof brushing, and the merits of longwall advancing and longwall retreating. All that is based on those discussions that you told us of between yourself and officials of the company?

A That's right.

Q And that appears extensively in the brief, statements of that kind, that is that certain things have been studied and certain things have been examined and certain things have been carefully gone into. Those things are based upon your discussions with the managers of the coal company?

A And the records of the company, yes sir.

Q What records?

A Engineering maps, and the plans showing the methods of mining that have been used, and statistics showing the number of cars of rock hauled out in this matter of brushing in relation to the amount of coal handled, the number of yards of entry that have been steel arched--all of those things.

Q That is the brushing you are telling us about?

A Yes sir.

Q. I thought we might save some time by just dealing generally with those statements you have throughout this brief. I just wanted it made clear that those statements of certain things having been studied and certain things having been carefully gone into, and so on, are based on discussions you have had with officials of the company, and upon any records of the company you have seen?

BY MR. FRAWLEY: And upon his own observation.

A. In every mine I went into I tried to see how the brushing was being carried on, how much rock was being taken out, how many men employed on this work and the other--tried to get a general picture of it.

By MR. COHEN:

Q. How far did those records go?

A. This longwall mining began in 1925 or 1926.

Q. I am not asking you when it began.

BY COMMISSIONER McLAURIN: Now, now, Mr. Cohen.

BY MR. COHEN: I am sorry.

A. They went back to 1926, I think.

Q. Well, do you remember?

A. There is a statement in here that longwall mining began in Princess in 1923. I didn't go back over the records till 1923; there was no occasion for it.

Q. Just what records did you go over? Back how far?

A. Well, I saw the operating records for a number of the mines for 10, 12 years.

Q. Then/you make the statement on page 31, the opening of the third paragraph: "The foregoing brief review of more than 20 years of pioneering in longwall mining," certainly as to a portion of that 20 years you must have based yourself--there is nothing improper about it; at least I am not suggesting it here and now--you based yourself upon discussions with officials of the company?

A. That's right.

Q. Did you point out to the officials of the company that in

Great Britain it had been decided to abandon the system of longwall wherever possible?

A Yes sir, we discussed that.

Q And did you call to their attention the fact that that decision, as you say here, deserves most serious consideration?

A Yes sir.

Q And what was their reaction?

A I don't recall what their reaction was.

Q Well, I mean did they come to any conclusion with you, did they arrive at any agreement as to what they would do in the future, or indicate to you what they thought they would do?

A I am not prepared to quote the conclusions of the company. I don't know if there were any conclusions expressed at that time.

Q When you say "at that time" have there been conclusions expressed at any other time to your knowledge?

A None.

Q Now you spent some time under the heading "Underground Datal Labor" discussing the question of the time spent by some of the men travelling to or from working place, beginning on page 33?

A Yes sir.

Q And what were you informed was the working place?

A You mean what is the working place of a contract miner or of a day man?

Q Well, you are discussing here all men, particularly datal labor.

A The working place of a longwall worker is at the longwall where he loads coal, and similarly with the other men on the longwall, the working place is the section of the wall to which they are assigned. In a room-and-pillar mine it is the room or rooms in which a man works. With a driver it is the place where he starts to haul his coal.

Q And as I take it, you are referring here to the amount of time consumed in the mine itself in getting to the working

places?

A That's right.

Q From what point?

A Well, the lamp time is taken from the time the lamp ---

Q I am not asking about the lamp time, I am asking about the travelling time. When did you begin to estimate it, if you did estimate it, or when did the officials of the company, if they estimated it, begin to estimate the travelling time? At what point?

A From the time they entered the mine, from the place they entered the mine.

Q You mean where they got the lamp?

A In some instances from the time they got the lamp.

Q Why did you prepare a table here suggesting there is a discrepancy between the hours for which the lamp is in use and the hours which the man is credited with being at work?

Clearly in your mind there is a distinction, isn't that right?

A I don't quite get your question.

Q I want to know just when you start reckoning the fact that a man is travelling in the mine to his so-called working place.

A Well, from my point of view it is from the time he enters the mine.

Q Well, from the point of view of the company officials, or from the point of view that supplied the basis for this table at page 33, what is the travelling time, or from what point is the travelling time being calculated?

A It starts from the time the rake, the hoist, leaves the surface and goes into the mine.

Q Who told you that?

A Well, I understood that is the basis on which these figures were made up.

Q I am just trying to get the source of that understanding. Who told you that?

A I don't recall particularly who told me that.

BY MR. FRAWLEY: Isn't this quoting from Exhibit 15, page 33?

BY MR. COHEN: Well, the figures are quoted, yes.

BY MR. FRAWLEY: The whole statement is, isn't it?

BY MR. COHEN: Not the point from which the travelling time is calculated.

BY MR. FRAWLEY: The transcript might show that, the time it was put in.

BY MR. COHEN: Do you know that?

A That is my understanding.

Q That the time is calculated from the time the man enters the mine?

A From the time the man-trip leaves the surface, the man enters the mine, that's right.

Q And that would, in your opinion, agree with a proper and reasonable basis for calculating travelling time?

A Definitely.

Q And certainly at that point, so far as the man is concerned, he is in the mine and he is at work, or as close to getting at work as the conditions of the mine permit? That is clear, isn't it?

A Well, you said getting to work. I don't know what you mean by that.

Q Well, getting to his working place, then? The moment he leaves the surface, as you told us, he is from that moment on at the disposal of the mine?

BY MR. FORSYTH: He didn't say anything of the kind.

A I thought we were talking about the travelling time.

Q You say from the moment he leaves the surface?

A Until he arrives at his working place.

Q Then it is correct, is it not, to base any calculation or consideration of what should be paid to these men upon the time that they spend from the moment that they leave the surface?

A I have nothing to do with that. I am not discussing wage rates.

Q I am just asking you discuss if that is a correct basis for estimating the travelling time that is consumed. Isn't that, I say, the correct basis for estimating the period during which they should be paid wages? That follows, doesn't it?

A No.

Q Well, aren't you discussing here on page 33 the waste, so to speak, resulting from this travelling time?

A I am not discussing the basis on which the men should be paid for travelling time.

Q I am not asking you.

A I thought you were, sir.

Q I am not suggesting that you are discussing it either. That is no reason for not saying something about it now if in fact is in point. Now aren't you on page 33 discussing specifically the cost to the company, or to the operation, let me put it that way, of this time spent on travel?

A I am pointing out--as I explained to you yesterday I tried to develop for myself whether mechanical loading devices can be installed in mines where the men are working fewer hours per day and producing coal in competition with the United States. That was my sole reason for exploring this.

Q Well, you are away from that subject. May I suggest to you if you will take a look at your brief you are discussing there the effective use of datal labor underground. Look at line 2 of page 33, if you care to.

A. Yes.

Q And in the course of discussing the effective use of datal labor you suggest that the amount of time indicated in this statement taken from Exhibit 15 is unproductive and in that sense costly to the operation?

A That's right.

Q And you say that that time is, or should be, based on the time taken by the worker from the moment he leaves the surface to the time he gets to his working place?

A What I am indicating is that it is inefficient for the company, for the industry, to have men spend so much time in

getting to their places. The facilities for getting men to their working places should be improved to the extent that the men give as much of the effective working period as possible using tools and producing at the face.

Q None of us will quarrel with you about that. I just want to be clear about the starting point at which time is consumed unproductively, so to speak. It is when the man drops from the surface?

A That's right.

Q Now then, did you discuss with the company the installations or substitutions that should be installed to make up for the time lost as indicated by the table?

A We discussed methods that are being used in other fields for getting men to the face sooner, quicker.

Q And was any conclusion arrived at?

A I don't know. No conclusion was arrived at. I passed on information as to some of the practices being used in some of the best equipped mines in the United States.

Q It was a general discussion between yourself and officials? You were telling them what you knew of that subject?

A That's right.

Q They did not indicate to you at all their agreement or their disagreement with your observations?

A No, they did not.

Q And certainly they did not indicate any planning that they had in mind with respect to making up for this loss as you indicate in travel time? That's right, isn't it? They didn't indicate anything?

A No. In some of the mines they are improving the rake haulages at this time.

Q Which mines?

A Well, I think Princess, for example.

Q Any other?

A I don't remember.

Q Now you suggest on page 35, paragraph 3, that all datal men

are working on a task system. Now upon what information is that statement based?

A Did you say paragraph 3?

BY MR. FRAWLEY: Page 35.

BY MR. COHEN: You say: "Under the task system, now in effect, when datal men complete their task, they leave the mine and refuse to do other tasks unless they are paid an extra shift."

A I didn't mean to imply that all datal men are working on a task system.

Q I just wanted to be clear about that. It is a fact, is it not, that a very small number of datal men are working on a task system?

A I don't know the percentage.

Q You didn't inquire?

A No.

Q Nor did you in this brief indicate that that only applied to some of the datal men? Did you?

Q Will you repeat the question?

A I say nor did you in this brief indicate that the statement you make in the opening sentence of the third paragraph of page 35 only applies to some datal men?

BY MR. FORSYTH: If you look at page 37 it will answer that.

BY MR. COHEN: Well, if it is there I will be told.

A I will try to answer the question. I did not indicate that it refers to all datal men; I implied that it refers only to certain datal men. I say "when datal men complete their task." I don't say that applies to all datal men.

Q I ask you to indicate one word, either on page 35 or page 37, that suggests that this business of working on tasks does not apply to all datal men?

BY MR. FRAWLEY: It doesn't suggest that it applies to some or to all. It just speaks for itself.

BY MR. COHEN: That is a matter for argument. My suggestion is if this statement is made without indicating that it applies to some it carries the implication that it applies to all.

BY MR. FRAWLEY: The Commissioners can read it for themselves.

BY MR. COHEN: It is clear that it only applies to some?

A That's right.

Q You didn't think it necessary to point that out?

A I don't think so, no.

Q Did you tell the company officials of those well designed machines now being used successfully in Britain?

A Yes sir.

Q Under conditions somewhat comparable with the Cape Breton conditions?

A I did.

Q And was any conclusion arrived at then with respect to these well designed machines?

A They were acquainted with the literature descriptive of those machines.

Q Well, it is nice to know that they read about them. What I would like to know, if you don't mind, is whether or not they indicated to you as to whether they intended to secure any of those well designed machines?

A We didn't discuss whether they intended to buy this machine or that machine, or when they intended to buy a machine.

Q I am not suggesting for a moment that you need spend any time with us as to whether or not Machine A was preferred in your opinion, or in the opinion of an official of the company, over Machine B. I am talking of those machines, as you do here, in general terms, where you say there were several well-designed machines. You did say you told the company officials, you found that they had read the literature. Now did you learn anything else from them?

A No, I didn't.

Q Nothing as to planning?

A No.

Q And you didn't ask them?

A I didn't ask them.

- Q Well now, would you mind just clearing up with me the significance that you intend to indicate in the last sentence of the first paragraph of page 41, where after talking of the modernization of mine plants and the introduction of expensive machinery you go on and say that it requires multiple shift operation and so on, and that the hourly and daily tonnage produced is one of the best indicators of efficient operation. Then you come to this sentence, "This requires not only good planning, well-maintained equipment, adequate and reliable power, but also well-trained and reliable workmen who work every day that the mine works." Now just what do you mean by that, "every day that the mine works?"
- A Well, I mean that those men work every day that the mine works. I don't know how much simpler I can make it.
- Q Well, let's assume that the mine is not working every working day, and that has happened in this district, as you will observe from the records you say you have examined.
- A Yes.
- Q Do you suggest that you can have well-trained and reliable workmen under such circumstances, which, as the Technical Advisory Committee report states, are forms of underemployment? Would you suggest that?
- A Well, I don't know why they wouldn't be well-trained if the men worked four days a week instead of five.
- Q Don't you think that you and I--and we are trained, perhaps not equally, speaking with modesty as to myself--we might lose some of our adaptability if some days we were not occupied?
- A There are a good many mines in the United States which certain periods in the year prior to the war only worked four days a week, other weeks worked five.
- Q How about three days a week?
- A Sometimes only three, in the State of Illinois.
- Q And if you have that as a regular feature of the working condition would you suggest that you would keep your men at the

same level of being well-trained and reliable? Do you suggest that?

A Oh, I wouldn't think they would lose their skill because they worked only three days a week instead of five.

Q Do you think they would lose any courage? Do you think they would lose any health?

A I am just as much in favor of regular operation as anyone in the world.

Q I am sure you are, but I am interested in knowing just why, whenever you approach anything that begins to describe the company operation you put in either a flattering term or some apologetic term ---

BY COMMISSIONER McLAURIN: Now, Mr. Cohen, you have made that suggestion once or twice. Mr. Young, to the knowledge of everybody on this Commission, is a gentleman. He has given us a great deal of help, and those gratuitous remarks that he is favoring one side or the other are entirely unnecessary, and will you please refrain from making them.

BY MR. COHEN: I am not suggesting that Dr. Young is not a gentleman, but it has been said that gentlemen prefer blondes but they may have other preferences, and I should like to know about it and I think the public would.

BY COMMISSIONER McLAURIN: Just go ahead and ask your questions.

BY MR. COHEN: I should like to know why it was necessary, in referring to maintaining well-trained and reliable men, to qualify the statement as to their work period with the phrase "every day the mine works" instead of saying "full employment"?

A I will tell you, sir. We will take a mobile loading machine with a crew of 15 men. Just assume we have a crew of 15 men.

Q I can save some of your time ---

A All right, I am going to answer your question, sir. You asked me to be specific and I will be specific. You have a crew of 15 men, loading machine operator and helper, cutter, shuttle shot-firer car operator/and so forth. All these are trained men. Now

if tomorrow we go in and the shuttle car operator and the helper on the loading machine are short, and the shot-firer doesn't get there on time, you not only lose the services of three men, you lose the services of a crew of 15 men.

Q I am very happy to receive that information. Do I take it now that you are only referring here to the effect on employment, so to speak, that would occur as a result of such conditions you now speak of?

A I am talking of absenteeism in a mechanized mine.

Q Oh, is that what you are talking about? And that is what you are referring to when you say there that this program requires well-trained and reliable workmen who work every day that the mine works?

A Yes sir.

Q You were there aiming at the target of absenteeism, is that it?

A Yes sir.

Q So that you were in that sense being critical of the men?

A I am not critical of the men at all. I am simply as a friend here, a neighbor from the United States, telling you our experience in 25 years, that there is no use starting on a program of this sort unless everybody tries to put the program over, and I will say for management as well as for labor. I state further on that the machinery must be maintained and the face must be inspected and everybody must do his part, not only labor.

Q That is a very fair statement. Nobody can quarrel with you for a moment about that, and certainly you will agree, to round it out properly it should be made clear that to get that full co-operation of the men which is needed they must be properly treated?

A That's right.

Q Both with regard to conditions and payment and so on? Isn't that right?

A I agree with you.

S.

-3908-

Dr. L. E. Young

Q. Have you made any estimate at all of the capital investment needed to carry out the suggestions you make as to mechanization and other improvements?

A. I have not.

Q. In respect to these mines?

A. I have not.

Q. Can you give us any approximation?

A. I cannot.

Q. In the terms of thousands, or hundreds of thousands, or millions?

A. No sir.

Q. How close could you come?

A. I will not make any estimate.

Q. You won't say whether it is one million or ten million dollars?

A. I won't make any estimate.

Q. Or anything in between?

A. No.

Q. Or anything over ten million?

A. No. I won't make any estimate at all.

Q. You quote a statement on page 48. You say "The following statement describes the early efforts of the engineers and mechanical staff of the Dominion Coal Company". Can you give us the source of that statement?

A. It was prepared for me by the Engineering Department of the Dominion Coal Company.

Q. Since you came into the investigation?

A. That is right.

Q. Were there a number of such statements prepared for you?

A. No, I asked for a chronological statement of the efforts in regard to mechanization.

Q. Does it appear there, the statement?

A. No.

Q. That does not appear in the record?

A. I think I have quoted the pertinent parts of it here.

Q. And I suppose your reference on page 51 to the situation in Western Canada was based upon some general conversation?

A. It was based upon my own personal observations.

Q. I didn't know you had been there?

A. Oh yes.

Q. And were you out there in connection with the work which you were doing for this Commission?

A. I was.

Q. It is perhaps hardly fair to you to question you on some of these things. Were you given any specific instructions as to what you were to inquire into and find out?

A. The Commission sent me a general order and said to go and visit the mines and give us your recommendations.

Q. About what?

A. In general.

Q. So as far as the Commission was concerned, your scope was unrestricted?

A. To go as an engineer and make my investigations.

Q. Did you discuss unloading cars, at the bottom of page 54, with the officials of the company?

A. The shuttle cars, yes sir.

Q. Any conclusion reached as to that?

A. No conclusions reached, no.

Q. Or any plan or decision of the Company indicated to you at all?

A. No, except when Mr. Wheeler was here with me we sat down with the officials of the company after making these inspections and the notes I have made here on the suggestions were transmitted to the Company, or given to the Company at the time, not in writing but verbally, and I don't know what conclusions the Company may have reached as to those suggestions.

Q. If they have reached any conclusions you have not been advised?

A. No sir.

Q. Nor have you inquired?

A. No.

S.

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Dr. L. E. Young

Q. Again on page 55 you say - "Statements are on file as to the effort of the Dominion Coal Company to introduce mobile loading machines in the No. 20 Colliery in 1937." What statements are you referring to there?

A. I think there has been included in the submission by Mr. McColl some reference to the Company's efforts towards mechanization.

Q. And that is what you are referring to?

A. Inasmuch as certain contravorsial matters were raised, it was outside my province, and I passed it up with this simple remark.

Q. That is based on the representations in the brief filed and read by Mr. McColl?

A. That is right.

Q. This paper submitted to the Institute of Mining Engineers referred to on page 57.

A. That is the British Institute of Mining Engineers. I have a copy of it which I will be glad to let you see if you are interested.

Q. Canadian or British?

A. British.

Q. What is the date of this paper?

BY MR. FRAWLEY - At the bottom of page 59 you will find the citation - Transactions of the Institute of Mining Engineers, 1945, Volume CIV, p. 191.

Q. You refer at the top of page 57 to some re-designed machine in 1943 in the colliery you were discussing, the Bolsover Company?

A. Yes.

Q. Is that also a British Company?

A. This is all British.

Q. Did you tell the Company officials about this re-designed machine?

A. I discussed it with them.

Q. Was anything indicated by the Company about the likelihood of making such substitution?

S.

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Dr. L. E. Young

A. They were very much interested, because I had seen the installation myself and explained to them how the machine works.

Q. I understand that they obviously would be interested in a discussion with you. But as a result of that discussion did they reach any conclusion about doing something, and if they did, did they advise you of it?

A. No, they didn't.

Q. And you didn't inquire?

A. No.

Q. You just passed on the information?

A. That is right.

Q. I suppose you called their attention to the fact set out in the paper of Mr. Young and Mr. Sanson that you quote from on page 58 that as a result of these installations - "The lighter work, coupled with the fact that the men are now working as a small team, has resulted in a reduction of absenteeism which is very striking.." Did you bring that to their attention?

A. Well I didn't have this paper available at that time of the discussions, as I remember, but they had a copy of the paper themselves.

Q. Was it discussed?

A. No, not that.

Q. Now this communication that you refer to on page 59 of August 24th, 1945, from the Company manufacturing the machine and giving you some particulars about it, and so on, or giving the addressee some particulars. What is that communication? It is not clear to me from the document.

A. I cabled the Company to find out if this rather large machine could be used on steep pitches.

Q. You cabled for information?

A. Yes, and I got a cable in reply, and then a succeeding letter and this was in response to the cable, because in our discussion here the question was whether or not this could be used on pitches as steep as these.

S.

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Dr. L. E. Young

Q. I was merely interested in to whom the communication was sent.

A. I sent a cable.

Q. We all know this communication was a letter addressed to you by the Managing Director of this company manufacturing these machines.

A. Yes.

Q. And did you pass that information on to the Dosco Company?

A. No.

Q. Or have any discussion with any of their officials or employees about it?

A. Not since August 24th. This arrived in Pittsburg.

Q. Or did you before you sent the cable or received the communication?

A. I didn't tell them I was making the inquiry. But I have since told some of them that I thought the machine could work on pitches up to this percentage given here.

Q. I thought you told me you had not since the 24th of August?

A. You asked if I discussed it with them then. Since I came back they had this and they said I see the machine will work on 15% grade.

Q. When you say "this", do you mean the letter?

A. No, the Report.

Q. And have they said anything to you about acquiring this machine?

A. They have not.

Q. And can you tell us anything about the probable cost involved?

A. I don't know.

Q. Well you suggest on page 61, in the last paragraph, that different types of machines might be used in different collieries more effectively, and for that reason you propose that trials be made at two or more mines to demonstrate what can be done with different types of equipment, selecting in each case that equipment which appears to be best suited to the local conditions. Can you particularize, or in any way indicate to us as to any

particular mine, just what its place should be in a sequence of experimentation, what drills should be carried on there and what type of equipment should be furnished.

A. Just a minute. On the following page, on page 62 I think the matter was outlined in considerable detail, and may I have your question specifically now. Is it, would you go into No. 25 or No. 24?

Q. I asked you if you could particularize with reference to the general statement you make at the conclusion of the paragraph at the end of page 61, and you refer me to page 62 and say that is the considerable detail. Is that it?

A. I think that is as far as I would go in making suggestions to the company. They would have to select the machine.

Q. You refer to No. 25, No. 24, No. 4, No. 20 and the Princess Mine.

A. Yes.

Q. And have you conveyed these suggestions to the Company?

A. I have.

Q. And how have they been received?

A. There has been no comment. When Mr. Wheeler was here we sat down after coming out of the mine and reviewed our observations and made suggestions, and these are suggestions made at that time.

Q. Is Mr. Wheeler an associate of yours?

A. No.

BY COMMISSIONER McLAURIN - It is in the report. Have you a complete copy of the report?

A. Yes.

Q. You will find that Mr. Young gives credit to the assistance of Mr. Wheeler.

BY MR. COHEN TO DR. YOUNG

Q. Mr. Wheeler is the mining consultant who came here from the British Ministry of Fuel and Power?

A. Yes. He is not associated with me. The Commission succeeded in securing leave of absence for him so that we might have the benefit of his advice.

Q. We have that cleared up now. When did that discussion take place between Mr. Wheeler and yourself and representatives of the Company?

BY MR. FRAWLEY - It was about the middle of August, shortly before the 20th.

Q. And you say you conveyed the same suggestions as now set out on pages 62 and 63?

A. Right.

Q. And received no communication from the company?

A. No sir.

Q. As to what they thought about it, or would do about it, if anything?

A. Yes.

Q. And that would also refer to the suggestions about longwall cutter loader?

A. Yes.

Q. Was that suggestion made at the same time?

A. No.

Q. It has been made?

A. No, except in this form.

Q. You mean in the form of this report?

A. That is right.

Q. During your discussions with the Company officials did you ever discuss the question of substituting a cutter loader?

A. May I explain. The cutter loader is the only machine that we refer to here that is suitable for longwall loading. Others are suitable for pillar and room. This is the only machine I am recommending for use in the longwall.

Q. I was not suggesting there was anything wrong with the recommendation.

A. No, but I thought I should explain that to you.

Q. Has that been explained to the officials of the company?

A. It has been in a very general way, because when I left here I didn't have the information that this type of loader could be used on the steeper pitches, so I have not had a chance to present that in any discussion with them. Because this cable and

correspondence with the company manufacturing the cutter-loader followed Mr. Wheeler's visit here.

Q. Then you had no indication from the Company as the result of the situation you describe?

A. No sir.

Q. Well now when you say on page 70, paragraph 2, - "The plants erected at the mines have met the needs in the past.." What do you base that statement on?

A. On coal preparation. This refers to coal preparation, on page 72.

Q. Yes, you are discussing the question of coal cleaning.

A. The very fact that it sold the coal is evidence to me that it met the needs, if they were able to sell it.

Q. Is that what you are basing it on? I am only asking the source.

A. Yes sir.

Q. Now I suppose that your inability to give us any estimate of the cost of carrying out any part of the program recommended by you, would apply with equal force to recommendations 1, 2 and 3 on page 75?

A. I would not have any estimate.

Q. You didn't make any estimate?

A. I did not.

Q. When you state on page 77 - "The future programs of the Dominion Coal Company and of the Old Sydney Collieries have given consideration to the allocation of coal reserves, the extension of haulage roads, the most favorable location of hoisting shafts and air shafts, and the extension of power facilities to serve most efficiently the areas in which mining is now being carried on." What do you base that statement on?

A. Conferences with the engineering and operating officials of the Company.

Q. Did you discuss with the Company this question of modern locomotives that you indicate on page 79 at the end of the opening paragraph there?

A. I did.

Q. When?

A. I don't remember any specific time. Several times.

Q. And have you any idea, or have you been able to form any idea as to the cost involved with respect to that item?

A. I have not.

Q. And did you receive from the officials of the Company with whom you discussed the matter, any indication of their policy or position or intentions?

A. No sir.

Q. And you didn't ask them to give you any such indication?

A. I did not.

Q. Now you do say on page 89, and I quote from the record - "It is recognized that such an undertaking would require a great expenditure of capital.." Can you, as to that reference, tell us what you had in mind when you made the statement "great expenditure of capital"?

A. No, I had no approximate figures in mind.

Q. Then after you advocate or recommend the establishment or construction of a cleaning plant as part of the program, you state on page 89 - "It would take the continuous work of a skilled staff working several years to develop the engineering data necessary to determine whether the construction of such a large undertaking with a large-size cleaning plant would be warranted."

A. The complete data, yes sir.

Q. What do you mean by several years?

A. Well it would take more than one year.

Q. I quote appreciate that much. What do you mean by several years? I won't ask you what is meant by a skilled staff, what size of staff, and so on. What do you mean by several years?

A. A year or two.

Q. And then at the end of the page you say - "If funds are available for such a mine, it would take several years to bring it into full production." Have I read that correctly?

A. Yes.

Q. And you say "if funds are available". What, if anything, did you have in mind as to the size of the fund?

A. I made no estimate.

Q. And when you state it would take several years to bring it into full production, did you have any idea as to the period of time?

A. If you started the new mine and put the shaft down several thousand feet, and then drove across the necessary tunnels several miles, it would take at least two or three years to do that work under the most favorable circumstances.

Q. And doing it even under the most favorable circumstances and taking two or three years, can you now give us any approximation of the cost that would be involved?

A. I cannot.

Q. And you have made no attempt to, have you?

A. I have not.

Q. Would you mind examining page 91 of your report, as I think you term it, and give me the authority for this sentence, which is the concluding sentence of the paragraph that follows the table. You say there - "It may be assumed that Saturday work will be discontinued and this should result in some improvement in the production per man day." Would you mind informing us as to the basis of the assumption you make there, that Saturday work will be discontinued?

A. That is my own assumption.

Q. But one assumes something based on some information received from some source.

A. Well the cost of coal produced on Saturdays' is so much greater than the cost of coal produced on other days, that in my humble opinion the continued expenditure of money for that small tonnage of coal would hardly be justified.

Q. So when you say "It may be assumed that Saturday work will be discontinued", what you intended to convey and state was that it was your opinion that that was a desirable step?

A. I don't want to go that far, but I assumed it would be discontinued.

Q. Again you say "assume". Some of us are interested in knowing if there is any basis for your assumption other than the expression of opinion?

A. It is solely my opinion.

Q. So this assumption reflects so-to-speak your faith in your opinion. I am not saying that in any unflattering sense. Is that right?

BY COMMISSIONER McLAURIN - I think he has covered it fully Mr. Cohen.

EXM. BY MR. COHEN (continued)

Q. I take it that when you dealt with the subject in your mind, before your opinion that led to that assumption, you realized that wage rates would have to correspond to any such change in working days, if such a change took place?

A. No, I didn't consider that at all.

Q. Now when you make a statement, as you do on page 94, that the situation in these fields - "Will require most skilful engineering and efficient management working in co-operation with labor that is willing to match the United States miner in hours spent working at the face with efficient tools and equipment." Now when you make that statement are you suggesting at all, in any way, that the worker here is not prepared to expand to the match that is indicated here, or the challenge?

A. I am not at all.

Q. Why make that sort of statement? "With labor that is willing to match the United States miner in hours spent working at the face with efficient tools and equipment."

A. Because I thought it was important to make it.

Q. Why?

A. Because I have known of places where they thought with the installation of machinery, that they would not have to work as hard or as long, and that machinery was magic. The purpose of machinery is to reduce the physical effort of man, but it requires skilled and full co-operation.

Q. Now then you have had very intimate contact with labor in the United States?

A. Yes, I have.

Q. And the conditions under which they work?

A. Yes.

Q. And the wages they receive?

A. Yes.

Q. And other features of their remuneration?

A. Yes.

Q. And the equipment with which they are supplied?

A. Yes.

Q. And the relations that prevail in terms of labor relations?

A. I have.

Q. Do you suggest that that is in any way duplicated here in Cape Breton?

A. What do you mean?

Q. I mean, are the workers here either supplied with labor, or working conditions or equipment comparable to that of the United States, or are they in any way paid on a basis comparable with the United States, or treated (in terms of labor relations) on a basis comparable with the United States? Does that exist in Nova Scotia?

A. The physical conditions and equipment are substantially different. I am proposing a change in the equipment and method.

Q. And treatment of the men, as to the conditions they work under and the wages they receive. Is that right?

A. I don't know much about the conditions you refer to.

Q. I am wondering why you didn't notify the Company to match the United States Companies?

A. I have said the most skillful engineering and efficient management..

Q. But you did suggest that they had to be willing to match, which sort of conveys a challenge that there is at least potentially a willingness. Why don't you ask the Company to match somebody's record?

Q. I do.

Q. Where do you ask it?

A. You mean in words?

Q. Yes?

A. I think all through the report.

Q. You have told me at least in reply to a dozen questions that you have not asked the Company what it proposes to do with respect to any of these proposals of your program, and that they have not informed you.

A. The labor has not informed me.

Q. Is it a fact that you have neither asked the Company to inform you, nor that you have been informed by the Company, as to their intention or position in respect to any feature of your program? Have you?

A. No, I have not.

Q. And then you went on to say that neither has labor discussed it with you?

A. That is right.

Q. Then why do you say that labor must be willing to match the United States miner? And I ask you why you have not asked the Company to match such a record.

A. I have not asked labor to do anything. I am simply stating my opinion as to the conditions in which they may hope to compete.

Q. I am repeating here, the last two lines of your paragraph 11 on page 94 has an emphasis that certainly suggests a potential unwillingness on the part of labor, because you say labor that is willing to match somebody.

A. I have not put that into it, and have not meant that.

Q. When you say so far as the management is concerned there will be required most skillful engineering, you don't suggest any basis of comparison by which the engineering and the skillfulness of it can be gauged, do you? You just say, there will have to be most skillful engineering and efficient management. You don't suggest any basis of comparison there, do you?

A. I think I have in several places.

Q. I am dealing with this sentence, which attempts to put the worker forward as someone who is potentially unwilling to fit into this program.

A. I have not implied that.

Q. Now I suggest that in a general way the same situation applies to the matters recommended by you, or reported upon by you, in Part 2 of your report, as to communicating these recommendations in the first instance to the companies concerned. That is, that you did have discussions with them?

A. I did, Sir.

Q. And in these discussions made these recommendations and discussed these matters?

A. Yes.

Q. I am not suggesting in precisely the same language.

A. I did wherever I have the opportunity. For instance, I have not been to the Joggins area since my first visit, so have had no opportunity of discussing it with them.

Q. But with the exception of that sort, you did have an opportunity to sit down and talk with the representatives of the companies involved in Part 2, or mentioned in Part 2 of your report, and you did so talk?

A. I did.

Q. And did you from them, or any of them, receive any indication as to their decision or program with respect to implementing any feature of your recommendation?

A. I did not.

Q. Did you inquire from any of them?

A. I did not.

Q. And I suppose we may take it also that you have as with respect to the program set out in Part I, you have not formed any estimate of the capital which would be required to implement the matters set out in Part 2 of your report?

A. I have not.

Q. No estimate at all?

A. No estimate.

- Q. And do you plan on making any such estimate?
- A. I have not any plans for making such estimate.
- Q. You are not making such estimate?
- A. I have no plans.
- Q. That is, so far as you are concerned it is not within the scope of the matters that you intend to concern yourself about?
- A. It is not within the scope.

EXAMINED BY MR. FORSYTHE

- Q. Now Mr. Young, you were asked by the Commission to visit these various coal mines and make a report upon them. You have spent how many years of your life in mining engineering, that sort of work?
- A. Forty-five plus.
- Q. You have in that time had to do with operating problems of various coal properties in the United States?
- A. I have.
- Q. And in England?
- A. In a consulting way.
- Q. In your experience have you found any mining operation that is really comparable with the operation carried on here?
- A. Well it is different from anything else on which I have worked.
- Q. And I suppose in making your program, or recommendations with respect to mechanization, you would consider that problem in its relation to the reduction of cost? That is that you would not recommend mechanizing mines unless you knew you would get some benefit from it?
- A. I would not.
- Q. And the conclusion you reached, I take it, is that under the conditions that prevail here the first step was to experiment with the type of mechanization you thought most suitable to the conditions in order to determine whether the mechanization was worth while in terms of reduction of cost?
- A. That would be the necessary and prudent first step.
- Q. And that is what you had in mind when you made the recommendation on page 62? That is when you refer to mines 25, 24, 4, 20 and

Princess?

A. That is what we had in mind.

Q. And until that experimentation takes place I assume it would be extremely difficult for anybody to set out a complete scheme of mechanization of these mines?

A. The practical way to proceed is to put in a unit in a mine under favorable conditions, give it a thorough test, and if it is successful add additional units in that mine, until the mine is completely mechanized, step by step.

Q. I gather from your report with the use of mechanical apparatus in a mechanized mine, the problem of coal preparation requires particular attention as compared with where hand-work is done?

A. It does.

Q. And that is why you have made the recommendation, or why you have discussed the construction and erection of a large cleaning plant?

A. That is right.

Q. That is, if these mines become completely mechanized, or to some considerable extent mechanized, you feel that the cleaning and preparation of coal will require particular attention?

A. That was my idea, Sir.

BY MR. FRAWLEY - I think Dr. Young goes a little further, because at some place he says even if there is no mechanization. (Page 71)

EXM. BY MR. FORSYTHE (continued)

Q. I recall that at some place you said that regardless of mechanization of the mines, the presence of certain competitive coals in the post-War market would require attention to cleaning and preparation.

A. I would expect that.

Q. Now then Mr. Young, had you any occasion under your instructions to inquire from the Company as to whether they were prepared to accept your recommendations or not?

A. I have no instructions from the Commission.

Q. Had you any occasion to ask them whether they were prepared to adopt the things you recommended?

A. I had not.

Q. You didn't think you had any occasion to do that?

A. No. I felt my first duty was to make a report to the Commission.

Q. And you were of course quite willing to give the management of these mines the benefit of your suggestions?

A. Discussions were made very freely with all the companies. I visited both in Canada and the United States. Free discussions about everything.

Q. You didn't find the management here unreceptive to ideas, did you, or see that they didn't want to discuss this at all?

A. No.

Q. Did they discuss these matters with you in a way that, having regard to your experience, would lead you to think they were competent and intelligent men?

A. That was my impression.

Q. Have you any reason to doubt the accuracy of any information given to you by Company officials?

A. No sir.

Q. Now your proposition for the large mine, that is the thing that you discussed as the third stage I think in your mechanization program; would that third stage involve the ultimate discontinuance of the other methods of operating, or the other approaches to this coal area?

A. It was my assumption without having thought this through as to the life of the various mines, that any large mine with a deep shaft and long range would be required to succeed some of the mines which were reaching the limit of their present installations and would pick up the seaward extensions of those property seams. That was why it was practically impossible to set up figures, because the hope would be that you could take care of ventilation facilities that you already have. I have in mind any large long-range property would extend development of some existing mines, especially in the Lingan area, and the additions to production would come primarily from further extensions of the existing mine.

EXD. BY MR. FRAWLEY

1. Dr. Young, I asked you to make a special inquiry, or to particularly look at conditions at No. 11 and No. 4?

1. Yes sir.

Q. And you did that?

1. I did.

Q. And you have made a short report of what you did in connection with No. 11 and No. 4, the people you saw, and certain recommendations you have?

1. Yes sir.

Q. Those reports have been typed, and I don't know whether they should go to the length of being filed as exhibits.

BY COMMISSIONER McLAURIN - Just bring them to the attention of everybody.

BY MR. FRAWLEY - I have done that, and I am bringing it to the attention of Mr. Cohen in case he has any questions to ask about that.

BY MR. COHEN - I have only one question with respect to that document that I would like to ask Dr. Young about, I mean one subject.

BY COMMISSIONER McLAURIN - Is this re-examination?

BY MR. COHEN - Just something arising out of this new document.

EXM. OF DR. YOUNG BY MR. COHEN

Q. I would like to call your attention to something stated by you in Part I. Would you take a look at page 21 Doctor Young, in which you there rely upon the statements of development work done and so on, and I think you told us earlier that those statements were the filings before this commission of the Company officials. Is that right?

1. I don't get the significance of your question.

Q. The source of the first paragraph on page 21?

1. The statement of development work has not been filed with the Commission. If I so stated, that was in error.

Q. Where did you see a statement of development work?

1. It has been reviewed by me.

Q. Where did you see it?

A. As I stated to you before, it was given to me by the Company.

Q. At the end of that paragraph you state that No. 11 mine will be worked out in four years. What is the basis of that statement?

A. The statement of the estimated life of the mines included in either Exhibit 15 or 18.

Q. And do I understand that you adopted those statements and those calculations?

A. Yes sir.

Q. Is there not some inconsistency between that and your recommendation in this document that has just been handed to us, that after experimentation with certain equipment in No. 4, it should be used in No. 11?

A. Well after it has accomplished the 4 years in No. 4, there may be some more coal in No. 11 and there may be a possibility of working thinner coal; the possibility of mining thinner coal in No. 11 with mechanical devices will have to be proved.

Q. Do you in this document refer to the matter you are now speaking of, the possibility of mining thinner coal and thereby extending the life of No. 11 mine?

A. I don't refer to it specifically, but I had it in mind.

Q. What is this special low-height mining equipment that you say would have to be provided for Mine No. 11?

A. If they get mining under 3 feet and have to put in crossbars or booms of 4 inches, considerable of the equipment now there would be too high to be used effectually, and then lower-height cutting machines and equipment would have to be provided.

Q. Is such equipment available?

A. It is.

Q. And has that been discussed with the Company?

A. It has not.

12:00 O'CLOCK NOON - HEARING ADJOURNED UNTIL 2:00 P.M.

2:00 O'CLOCK P.M. HEARING RE-CONVENED

BY MR. FRAWLEY - The stage has now been reached in this Hearing that I am now ready to call Mr. Morrison, who was some months ago appointed as financial adviser and consultant on accounting matters to the Commission. Mr. Morrison will submit his evidence in the form of Reports to which have been attached certain financial statements which costs and selling price. I have, in advance, made all of this information available to Mr. Forsythe as counsel for the Dominion Coal Company, and to Mr. Cohen as counsel for District 26 United Mine Workers. I thought it was advisable for me to make this available to Mr. Cohen, but I have this observation to make. I would ask that Mr. Cohen be discreet in the use he might make of any of the information in these statements which deal with selling prices particularly, and matters of that kind, because I think the general dissemination of that kind of information would be detrimental, not only to the Company, but perhaps to the workers themselves. This applies equally to Mr. Forsythe. In any examination on this material, I ask that that be kept strictly in mind, and I am asking Mr. Morrison to submit his material knowing that they will do that.

It also refers to sale prices and costs of other companies as well as the Dosco affiliates.

BY MR. COHEN - I am rather glad my friend has spoken to the question. I spoke to my friend, I think Sunday night just as he was coming in to dinner, stating that in matters of this sort when financial statements are furnished to me, I am sometimes in somewhat of a predicament as to the extent to which it is anticipated I can make the statements available to the clients I represent, and I would prefer that that be made clear so-to-speak. I am not suggesting that it be done now, but would ask that it be done by Mr. Frawley. I suggested that I would indicate to Mr. Frawley any statements that my clients would ask copies of, and if there was nothing irregular about furnishing that information, I could then do so.

BY COMMISSIONER McLURIN - Mr. Cohen and Mr. Forsythe have all the statements?

BY MR. FRAWLEY - Yes.

BY COMMISSIONER McLURIN - And your remark relates to the question of selling prices, the disclosure of which to the public is only related to this part of the industry in which everybody is mutually concerned?

BY MR. FRAWLEY - My remarks extend to any other use to which this may be put, and not only to this examination.

I would like to offer -

Exhibit 204 - General Report on Financial Statements
1930 to 1944 on Coal Companies in
Nova Scotia.

BY MR. MORRISON - That has to do with Dominion Coal Company and Cumberland Railway & Coal Company..

BY MR. FORSYTHE - It has to do with all coal companies in Nova Scotia.

BY MR. FRAWLEY - It is called "General Report". Then I will offer the report dealing with the financial matters of Dominion Coal Company, Cumberland Railway and Coal Company, Sydney and Louisburg Railway, and Dominion Rolling Stock Company Limited, which we will call EXHIBIT 205

Then the report re the Acadia Coal Company, which we will call EXHIBIT 206

The the next one, the report on Old Sydney Collieries, which we will call EXHIBIT 207

And the next one is the report on Various Coal Companies of Nova Scotia, which we will call EXHIBIT 208.

I think I should call attention to the fact that on the cover of the volume marked Exhibit "A" to 208 it reads "Various Coal Companies Nova Scotia and New Brunswick, and the only reference made to this volume will be with respect to Nova Scotia Companies.

Dealing with the red books, I think probably for convenience of reference we should mark them.

"Financial Statements, Dominion Coal Co. Ltd., Cumberland Railway & Coal Co., Sydney & Louisburg Railway and Dominion Rolling Stock Company Ltd. we will mark Exhibit "A" for identification.

BY COMMISSIONER McLURIN - That is because they don't form part of the record?

A. Yes.

Q. And because of their confidential nature?

A. That is right.

BY MR. FRAWLEY - Now the next one will be "Financial Statements, Acadia Coal Company Ltd." and that will be marked Exhibit "B" for identification. And the next one the "Financial Statements of Old Sydney Collieries Ltd." and that will be marked Exhibit "C" for identification; and that of the so-called "Independents" or Various Coal Companies, we will mark Exhibit "D" for identification.

EXAMINATION OF MR. MORRISON BY MR. FRAWLEY

Q. Now Mr. Morrison, where do you practice the profession of Chartered Accountant?

A. In Calgary.

Q. And you are a member of the Alberta Institute of Chartered Accountants?

A. Yes.

Q. And I see you are a Fellow of the Institute of Chartered Accountants?

A. That is right.

Q. How many years have you been a member?

A. Since 1923.

Q. And generally speaking, what has been the nature of your practice as a Chartered Accountant?

A. My firm conducts a general practice in the Province of Alberta, which takes in practically all of the industries we have in Western Canada, and I have been engaged on different occasions

on public hearings and Commissions and matters of that kind.

Q. You have appeared before Royal Commissions reporting on investigations you have made into financial affairs of companies with which those Commissions were concerned?

A. In some instances.

Q. And have appeared in Courts of Law to give evidence on matters of litigancy in cases with which you have had to do?

A. Yes.

Q. And you say your practice has extended over a period of -

A. Some 22 years.

BY MR. FRAWLEY - I have another Exhibit which I will offer as EXHIBIT 209, and it is a chart which shows the corporate set-up of Dominion Steel & Coal Corporation and its affiliates and subsidiaries. Mr. Forsythe was good enough to submit it to his clients and it was accepted as a true representation.

BY MR. FORSYTHE - Of course it does not set up the capital of the particular company. .

BY MR. FRAWLEY - But it is not in that respect in error, but simply does not set up the capital of Dominion Steel & Coal Corporation, Limited.

A. Yes.

EXM. OF MR. MORRISON BY MR. FRAWLEY (continued)

Q. You were retained by this Commission to make some investigation into the financial affairs of the coal mining subsidiaries of Dominion Steel & Coal Corporation?

A. Of Coal Companies in Canada.

Q. But you were retained to investigate the coal companies in the Maritime Provinces?

A. That was part of my retainer.

Q. And you have prepared reports which have just been marked as Exhibits, which deal with the industry in the Province of Nova Scotia?

A. That is correct.

Q. I think the exhibits having been marked, we can proceed to put them into the record. You prefer to deal first with the

General Report?

A. Yes, but before doing that I would like to point out that in connection with this work my partner, Mr. Simpson, who is present with me, has done most of the detail work and has been in charge of that part, and is much more familiar with those matters than I am, and when matters of detail are required, I would ask to be given the opportunity of consulting with him, of having him reply to that himself.

Q. Mr. Simpson is a member of your firm?

A. Yes.

Q. And a member of the Institute of Chartered Accountants in Alberta?

A. Correct.

Q. And has been associated with you for many years?

A. Yes.

MR. MORRISON then proceeds to read Exhibit 204, as follows:

The Hon. Mr. Justice W.F. Carroll - Chairman,
The Hon. Mr. Justice C.C. McLaurin - Commissioner,
Angus J. Morrison, Esquire - Commissioner,
Royal Commission on Coal,
Ottawa, Canada.

Sirs:

Pursuant to your instructions, we have made an examination and analysis of the financial statements and other material submitted to your Commission in reply to a questionnaire sent to coal mining companies, dated 12th February, 1945. Under separate covers we are submitting explanatory reports and statements on the financial affairs and operating results of the following companies in Nova Scotia:--

Dominion Coal Company Ltd., and Subsidiaries,
Cumberland Railway and Coal Company,
Sydney and Louisburg Railway,
Dominion Rolling Stock Company, Ltd.,
Acadia Coal Company Limited,
Old Sydney Collieries Limited,
Bras d'Or Coal Company Limited,
Greenwood Coal Company Limited,
Hillcrest Mining Company Limited,
Indian Cove Coal Company Limited,
Intercolonial Coal Company Limited,
Joggins Coal Company Limited,
Standard Coal Company Limited,
Sullivan Coal Company Limited.

Nature and Scope of Examination

In order to obtain a fairly comprehensive view of these operations, the required details were requested for a period of fifteen (15) years, viz: 1930 - 1944. By this procedure it was hoped to present to your Commission the experience of the various Companies involved during a period which might be divided into the following cycles:-

1930 - 1935 - - Depression period,
1936 - 1939 - - Normal period,
1940 - 1944 - - War period.

Owing to the magnitude of such a task, it was not possible, even had it been deemed necessary, to make a detailed examination of the books of the various companies. We have therefore accepted the statements presented to us, and have made such examination of necessary matters as was deemed advisable. Wherever possible, we have reconciled the material presented with the records of the Companies, or with their published statements.

Accounting Records:

We found considerable difference in the accounting methods of the various Companies surveyed, both as to principles involved, and in the amount of information which was available from the records. In some Companies very detailed accounts were maintained for the recording of the Company's transactions, while in others the bookkeeping was reduced to a minimum. Some Companies use the long or gross ton of 2,240 pounds for their quantity records, while others use the short or net ton of 2,000 pounds.

Expenditures - Capital or Operating

Dealing first with the difference in accounting principles employed by the various Companies as to the distinction between capital and income expenditures, these may be divided into three main headings, as follows:-

- I - AFTER THE COLLIERY HAS BEEN PUT ON COMMERCIAL PRODUCTION ALL EXPENDITURES WHEN MADE ARE CLASSIFIED AS OPERATING EXPENSES UNLESS SUCH EXPENDITURE
- (1) increases the initial daily production,
 - (2) decreases the cost of production,
 - (3) increases the available reserves of coal.

The report of the National Coal Association (U.S.A.) dealing with a standard system of coal accounting, made in 1919, states, in part, as follows:-

Part 2 - "After a coal mine has been developed and equipped to its planned output capacity, charges to its Capital account should cease, and thereafter there will be few, if any,

permissible charges to that account.

"Usually after one-third or one-half the life of the mine has elapsed, and from time to time thereafter, additions to power plant and major items of equipment will be necessary, and the cost thereof should be set up in appropriate Additions and Betterments Accounts, and for these will have to be established an additional and separate depreciation rate based on the remaining coal or life of the mine....."

".....Hence, sound consideration of the nature of investment in coal mining dictates that all outlay must be classified and dealt with as follows:-

(a) The initial cost of the mine in its entirety, chargeable to Capital Account - and which must be redeemed by periodically setting aside, from current gross income, sufficient amounts to replace such investment within the life of the mine. It is obvious that the fund thus derived must be held inviolate for ultimate capital redemption, and if not applied immediately to the retirement of outstanding securities, invested in assets separate from the depreciating property, or kept liquid in the business.

(b) The cost of Additions and Betterments, so large that such costs should be capitalized, must likewise be redeemed by setting aside from gross income adequate provision for reimbursing such cost during the life of the mine.

(c) To ordinary operating expense should be charged the cost of repairs and replacements of plant and equipment, and also the cost of additional equipment necessary because of the extension of workings to maintain the normal output."

The Bureau of Internal Revenue of the United States, in its regulations in respect to the taxation of mining companies, lays down the following rule:-

"Article 222 - Allowable Capital Additions in Case of Mines

(a) All expenditures for development, rent and royalty in excess of receipts from minerals sold, shall be

charged to capital account recoverable through depletion, while the mine is in the development stage. Thereafter, any development which adds value to the mineral deposit beyond the current year shall be carried as a deferred charge and apportioned and deducted as operating expense in the years to which it is applicable.

(b) All expenditures for plant and equipment shall be charged to capital account recoverable through depreciation, while the mine is in the development stage. Thereafter the cost of major items of plant and equipment shall be capitalized, but the cost of minor items of equipment and plant, necessary to maintain the normal output, and the cost of replacement, may be charged to current expense of operation."

The Canadian Income Tax Division have not given any rulings on mining companies in respect of this particular problem, but deals with each individual case on its merits.

Another method of apportionment of expenditures is outlined hereunder: --

II - All development, tunnels, airways, etc., after the mine has been put on commercial production, are charged to a "Development Account" and recovered from operations through a charge to mine costs of varying rates per ton, thus having the effect of spreading or deferring the expenditure over a period of years. The basis for this treatment is that the life of the mine has been extended. With plant, equipment, buildings, etc., the useful life is the determining factor in arriving at whether the item is capital or operating, and is also the means of ascertaining the depreciation charge or rate.

BY MR. MORRISON - I might state that that is in connection with their Form 4A freight subsidies.

MR. MORRISON continues Report

The Emergency Coal Production Board has made the following regulations:-

"Articles having a comparatively short life should be replaced out of income and charged directly to costs under the

loading of stores. For example, depreciation would be warranted on head frames, haulage machinery, conveyors, coal trucks, coal cutting and drilling machinery, etc., but not on rails, piping, shaft and haulage road, fitments, wiring, tools, etc."

and

"There shall not be included as a cost the following unless approved by this Board or other competent authority:-

"Extraordinary expenses such as new mine development, fire losses, floods, cave-ins, etc."

III - The third method which has been used and which is, in effect, a variation of the second method, is the setting aside, annually, as a charge to mining costs, an amount per ton for a reserve for Betterments and Extensions, or, in other words, for major expenditures.

This method also has the effect of spreading costs over a period of years, and reflects reasonably accurate costs. Precaution must be taken in this method, however, to place a limit on the amount of the reserve as otherwise, an unnecessarily large reserve really means overstated mining costs.

It has been our experience that Method No. II is followed by a number of Coal Companies in Canada, and, in our opinion, is the preferable method of presenting mining costs. By this procedure the annual operations are charged with an equitable portion of the original cost, based on the use of the Equipment or the Development for that period. The practice of charging operations with the amount of the expenditure when it is incurred, has the effect of varying the annual costs unduly.

It is recognized that the amount of the expenditure should not be the determining factor as to allocation, but rather the nature of same. It is therefore necessary to have engineering guidance in the proper distribution of these amounts. The Engineer will also be able to set rates of depreciation or write-off in accordance with the expected useful life of the asset.

In our explanatory reports on the financial statements, we have given the particulars of various expenditures, which have

been charged to mining costs at the time the expenditures were incurred. As these items, in our opinion, are of a capital or deferable nature, they should be charged to mining costs over a period of years in order to determine more accurately the annual mining costs.

Capital Expenditures included are:--

- (a) Labor Costs,
 - (b) Material costs.
-

In addition to the items specifically mentioned as being charged to Operations, instead of being Capitalized or Deferred, the point is raised for the consideration of your Commission, and for further enquiry by the Engineer, of the possible inclusion of expenditures of a capital or deferable nature in the mining costs under the foregoing heading.

With regard to the possible inclusion of such items in (a) Labor Costs, we have cited in the explanatory reports the following examples:--

1. Dominion Coal Co. Ltd.

For the years 1936 to 1944, the same number of mining labor, viz. 566,000 manshifts, not only produced 835,000 less tons in 1944, but the other labor involved increased by 399,000 manshifts.

2. Cumberland Railway & Coal Co.

Comparing the years 1939 and 1944, the mining labor decreased by 17,000 manshifts, compensating a decrease in tonnage of 16,000 tons, but the other labor employed increased 98,000 manshifts.

3. Acadia Coal Co. Ltd.

In the years 1932 and 1944, practically the same tonnage was produced, viz. 315,000 tons. The mining labor decreased by 4,000 manshifts, but the other labor involved increased by 73,000 manshifts.

4. Old Sydney Collieries Ltd.

For the years 1939 and 1944, the tons produced were

practically the same, viz. 609,000 tons. The mining manshifts decreased by 11,000 manshifts, while the other labor involved increased by 22,000 manshifts.

There may be explanations for all of the foregoing which make all of the charges involved proper to be placed in mining costs. We feel, however, that it is very important to have engineering comment on this matter as the accounting material cannot determine the true situation.

The inclusion of capital or deferrable charges in mining costs under the heading of (b) Materials, can only be ascertained by an engineering comparison of the per ton cost increase in these expenditures. On the appropriate schedules of mining costs the details of such expenditures are given, but in this case also, the accounting information is not sufficient to come to any definite and accurate conclusion.

In recommending the spreading of major expenditures over a period of years we recognize that to institute such a system in the accounts under examination, due consideration must be given to the similar expenditures made prior to 1930, the benefit of which, under this system, enures to succeeding years. As we have no record of such expenditures, our examination being limited to the years 1930 - 1944, it follows that the costs for the years 1942, 1943 and 1944 will be the only years that will correctly reflect the proper costs on this basis.

It will be appreciated that any overcharging of costs, as referred to in the foregoing, has the effect of understating some asset of the company, either a capital item or a deferred charge.

As we are unable to complete the allocations of expenditures without engineering assistance, we have not prepared amended cost figures or financial statements. With all material readily available, however, these adjusted statements can be prepared without unnecessary delay.

Increases in Reserves

For the respective periods involved up to 31st December, 1944, sundry operating reserves increased as follows:-

Dominion Coal Company Ltd.)	
Cumberland Railway & Coal Co.)	\$ 2,129,626
Acadia Coal Co. Ltd.	\$ 238,746
Old Sydney Collieries Ltd.	\$ 138,426
	\$ 2,506,798
Other Nova Scotia Companies (8)	\$ 117 (Decrease)

Reference has been made earlier in this report to the necessity of supervision of the amount of reserves required or desirable. Any amount over the required figure should be considered as part of the surplus account of the Company. As pointed out previously, the building up of reserves in excess of requirements has the effect of overstating the mining costs.

Inter - Company Transactions(a) Acadia Company and Nova Scotia Steel Company

As mentioned on page 3 of our explanatory report on Acadia, the amount of \$1,176,564.33 owing by the Scotia Company to Acadia, was written off by Acadia as an uncollectable account.

We have been furnished with the particulars of the account in the original amount of \$1,703,410.81. These are as follows:

Coal supplied to Scotia for Trenton Steel Works,	-	\$1,066,784.73
<u>Less</u> Contra Accounts for steel purchases by Acadia,	-	<u>170,512.10</u>
		\$ 896,272.63
Interest charged by Acadia on monthly balances,	-	272,722.31
Cash advances by Acadia to Scotia,	-	<u>534,415.87</u>
Amount of account owing - 1933,	-	\$1,703,410.81

Under the re-organization plan of the Scotia Company, in 1938, a payment of \$526,846.48 was received by Acadia, thus

reducing the net loss to \$1,176,564.33.

On Page 4 of our explanatory report on Acadia, we point out that during the fifteen year period under review, dividends were only paid for the years 1930 and 1931 on the 6% Cumulative Preferred Stock of \$1,900,000.00, which stock was owned by the Scotia Company. While no profits were earned by the Acadia Company between the years 1932 and the reorganization of the Scotia Company in 1938, the question has been raised that in viewing this loss to Acadia, due consideration should be given to the unpaid dividends on the preferred stock between 1932 and 1938. On the basis of $6\frac{1}{2}$ years, the amount involved would be \$741,000.00.

BY MR. MORRISON - It is left in the books as a net loss of \$1,176,564.43.

MR. MORRISON continues report

(b) Sales of Coal to Associated Companies

A summary of the losses sustained by the Coal Companies in respect of these sales, and which have been detailed in our explanatory reports, is as under:-

Dominion Coal Co. Ltd.

<u>Sales to:</u> Steel Division,	\$ 7,584,623.04
Seaboard Power,	85,813.43
Eastern Car Company,	2,805.40
Trenton Steel Works	<u>1,433.87</u>
Loss on Sales - Associated Companies	<u>\$ 7,674,675.74</u>

Acadia Coal Co. Ltd.

Page 7 - Acadia Report,	<u>650,549.45</u>
-------------------------	-------------------

Old Sydney Collieries, Ltd.

1939/1944 - Steel Division,	<u>40,665.81</u>
Total Loss - All Companies	<u>\$ 8,365,891.00</u>

BY MR. FRAWLEY - Mr. Morrison, just to understand, what do you mean when you say Loss on Sales?

S.

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K. J. Morrison

A. A loss to the Company by a comparison of the mining cost compared with the net price received at the mine.

Q. In other words the coal was sold at these figures, not the mining cost as recorded in the books of the Company?

A. That is right.

MR. MORRISON continues Report

We have been supplied by the Dominion Coal Company with a memorandum setting out the procedure used in arriving at the price of coal supplied to the Steel Division, and we suggest that this document be read into the record for future reference.

BY MR. MORRISON - Now I have that document here, which is a memorandum re procedure used in arriving at the price of coal supplied Dominion Steel & Coal, and was in answer to a question directed to the Dominion Coal Company, No. 21. Perhaps it might be appropriate that it should be read.

BY MR. FRAWLEY - It has not been marked as an Exhibit, so I think if he reads the answer it will make it part of the record.

MR. MORRISON then reads the document referred to, as follows:-

DOMINION COAL COMPANY LIMITED

Memorandum re Procedure used in arriving at
Price of Coal Supplied to
Dominion Steel & Coal Corporation Limited

The original price of coal supplied to the Dominion Iron & Steel Company was fixed by contract dated June 30th, 1899, the Agreement covering the sale of run-of-mine coal at a price of \$1.24 per gross ton delivered at the Sydney Steel Plant, over a period from June 30th 1899 to April 1st 1902.

This Agreement was cancelled and a new one entered into dated October 20th, 1903, and extending over the same period. Under the new arrangement, the Steel Company agreed, after the expiry of four years, from the date of the Agreement, to accept slack coal for use in steel making and for other purposes for which slack coal could be used without disadvantage to the Steel Company. The price of all coal supplied to the Steel Company was the same as in the original contract, namely \$1.24 per gross ton. The contract also provided that during the period the price

could not be under \$1.24 per gross ton.

The agreement also provided that the price could be adjusted if requested by either party at intervals of five years in accordance with a formula set out in the Agreement.

The first adjustment was made June 30th, 1899, and the price was increased from \$1.24 per gross ton to \$1.55 per gross ton. Other adjustments were made from time to time as agreed upon by the Board of Directors of each Company up to the year 1926 when the price at that date was \$3.50 per gross ton.

On July 1st, 1926, the affairs of the Dominion Iron & Steel Company were taken over by the National Trust Company as Receivers and Managers and a revision of the price was requested by both parties. Representatives for each company were appointed as a committee to make a recommendation as to the fair price chargeable at that time. The Committee reported that as the only market available for the coal used by the Steel Company, if that Company was not operating, was the Montreal Market and the price to the Steel Company should be based on the amount realized at the mines for coal of a similar quality supplied on large contracts in the Montreal Market. This recommendation was accepted by both parties and on that basis the price was fixed at \$4.28 per gross ton, for run-of-mine, and \$3.63 per gross ton for slack.

On this basis the price has been adjusted in the following years as under:

	<u>run-of-mine</u>	<u>slack</u>
Year 1928	\$4.29	\$3.71
1929	4.45	3.82
1930	4.65	3.72
1931	4.54	3.71
1932	4.59	3.67
1933	4.00	3.50
1934	4.00	3.50
1935	4.00	3.50
1936	4.00	3.50
1937	4.25	3.74
1938	4.45	3.95
1939	4.45	3.95
1940	4.45	3.95
1941	4.60	4.06
1942	4.85	4.31
1943	4.85	4.31
1944	5.91	5.37

In the years 1933, 1934, 1935 and 1936, when business was greatly depressed, the Steel Company endeavored, and did obtain, considerable export business. To obtain this business it was necessary for the Steel Company to reduce the selling price of its products considerably below the domestic price. An increased production of the Steel Company meant increased coal consumption the Directors of the Dominion Coal Company agreed to reduce the price of coal supplied and used in the production of steel for export in the amount of 45 cents per gross ton in the years 1933 to 1936 inclusive and in the years 1939 and 1940 in the amount of 50 cents per gross ton.

Effective October 1st, 1941, prices were increased by 25 cents per gross ton under authority of the Coal Administrator to cover Cost of Living Bonus. On January 1st, 1944, prices were increased by \$1.06 per gross ton, under authority of the Coal Administrator to cover increased wages paid to the Dominion Coal Company employees.

BY MR. FRAWLEY - The document Exhibit "A" sets out the loss on the coal to the Steel Division in each of the areas you have examined?

A. Yes, that is shown under the caption of Sales, Schedule S/4 in Exhibit "A" for identification.

Q. You say you have not enough precise information to compare, taking the year 1939 for instance, the net prices received at the mines from the Steel Division was \$3.591 per ton?

A. That is correct.

Q. Against a mining cost of \$3.977 per ton?

A. Yes.

Q. Or a total loss of \$352,101.37 that year?

A. Right.

Q. If you wanted to know how that compared with the prices received from the large contracts on the Montreal Market, have you any material gathered with which to compare it?

A. On the preceding schedule S/3 we have the details.

Q. What page of S/3?

A. If you are taking 1939 you have to get the year in question.

That would be page 2.

Q. Looking at page 2 of Schedule S/3 you find what?

A. Take for instance the Montreal Coke and Manufacturing Company.

Q. They paid?

A. \$4.281 for 72,942 tons of mine-run coal.

BY MR. FORSYTHE - We washed that coal before we went it to Montreal.

Q. Before you sent it to LaSalle?

A. Yes, and the Steel Company washes its own coal.

Q. We only compared it because the contract directs us to compare it with what you get on large contracts in the Montreal Market.

Q. You cannot compare apples and peaches?

A. We can at least compare the price, and then allowance will be made for the fact that the LaSalle coal is washed. Let us take something else then. Let us take C.N.R. coal on the same schedule, Levis coal. I don't know whether you call that Montreal Market coal or not, but it is large sales. In 1939, 190,628 tons, net price realized was \$4.579 - Schedule S/3, page 2, Levis, water.

Q. That is for mine-run coal?

A. Yes.

Q. And we find from the statement you read into the record that the Steel Division paid in that year \$4.45 for mine-run coal?

A. Yes.

Q. If Mr. Forsythe thinks that is not a proper comparison.

BY MR. FORSYTHE - When you are comparing Levis you are not comparing Montreal.

BY COMMISSIONER MORRISON - Perhaps it will be well to let Mr. Morrison conclude, and then we will have our examination.

BY MR. FRAWLEY - Mr. Morrison has a lot of material compressed in this report, and I thought perhaps it had better be examined as he went along.

MR. MORRISON continues Report

The basis of the price to the Steel Division appears to be on a comparison with prices obtainable on large contracts on

the Montreal Market. While the material supplied shows the average selling price on the Montreal market, we do not have the particulars of any individual contract.

The selling price for coal obtained by the producer is controlled by the Wartime Prices and Trade Board, and therefore it would be necessary to have the approval of the Board before any adjustment in these prices could be made.

The effect, however, of such sales at prices lower than cost, is to increase the loss of the Coal Companies, and therefore this matter should receive consideration by your Commission.

From the summary of these inter-Company sales, it will be seen that the major amount is to the Steel Division, but it is pointed out that losses are also incurred in sales to the Eastern Car Company and Seaboard Power Company, and we would suggest that explanations be given by the Coal Companies to support this procedure.

(c) Sydney and Louisburg Railway

Tariff differential - Steel Division - \$86,907.69

On page 29 of our explanatory report on Dominion Coal Company, it will be noted that the Dominion Company suffered charges aggregating \$86,907.69 in respect of the above tariff differential. We understand that this arrangement is a continuation of an old agreement, whereby the Steel Division is given a rate of 25 cents per ton on any of its products carried on the S. & L. Railway. The Railway Company is paid the full tariff and the difference between such full tariff and the 25 cents per ton, is borne as an expense by the Dominion Coal Company.

Capital Expenditures

For the purpose of comparison, we submit hereunder the expenditures made during the fifteen year period under review, which amounts have been classified by the Companies as Capital:-

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K. J. Morrison

Dominion Coal Co. Ltd.,)	
Dominion Utilities Co.,)	
Sydney & Louisburg Rly.,)	\$ 4,202,187.19
Cumberland Railway & Coal Co.,	525,422.13
Acadia Coal Co. Ltd.,	178,266.02
Old Sydney Collieries Ltd.	
(Expenditures by Nova Scotia	
Steel & Coal Co. Ltd.)	<u>21,898.94</u>
	\$ 4,927,774.28

BY MR. MORRISON - I might mention there that the property is operated by Old Sydney but is owned by Nova Scotia Steel & Coal. That is why the amounts appear in their accounts.

MR. MORRISON continued Report

Other Nova Scotia Companies - \$ 798,190.00

Capital Employed

Statement "A" - Balance Sheets of Dominion Coal Co. Ltd., shows the amount of \$13,636,263.53 as being the capital employed by Dominion Coal Company and its subsidiaries as at 1st January 1939, for the purpose of obtaining a standard profit for Income Tax procedure.

In this statement, however, the book value of the assets is reduced by the following:

(a) Bonds	- \$ 8,471,000
(b) Depletion on coal area,	
allowed by Income Tax Division	<u>7,796,014</u>
	<u>\$ 16,267,014</u>

The ascertainment of the actual amount of capital employed depends on many considerations, which are listed hereunder:-

- (a) The original amount paid for the properties,
- (b) The charging to operations of expenditures which should have been capitalized,
- (c) Depreciation properly allowable,
- (d) Depletion to be allowed.

Until such time as the above items have been determined, we are not submitting any statement on the amount of capital employed by the various Companies.

For your information, however, we submit herunder a summary showing the amounts invested in the various Companies as at 31st December, 1944, and represented by Common Shares, Preferred Shares, Bonds and Surplus and Reserves:-

BY MR. MORRISON - I might say we have divided this into Cape Breton and the other Mainland operations.

BY COMMISSIONER MORRISON - Always wise procedure in these parts.

Cape Breton Operations

Dominion Coal Co. Ltd.,	\$ 24,125,310.82
Old Sydney Collieries Ltd.,	1,403,820.48
Bras d'Or Coal Co. Ltd.,	744,481.90
Indian Cove Coal Co. Ltd.,	57,124.19
Sullivan Coal Co. Ltd.,	<u>4,565.87</u>
	<u>\$ 26,335,303.26</u>

The Assets making up the above figures are as follows:-

Properties		
Depreciable	\$ 29,523,569.85	
Less Depreciation Reserve	<u>20,919,248.20</u>	\$8,604,321.65
Non-depreciable	18,764,437.02	
Less Depletion Reserve	<u>4,619,052.53</u>	11,145,384.49
Net Current Position		6,248,314.61
Deferred Assets		<u>337,282.51</u>
		<u>\$ 26,335,303.26</u>

The invested equity is represented by:-

Common Shares	\$ 12,661,900.00
Preferred Shares	5,959,775.00
Bonds	4,943,000.00
Surplus and Reserves	<u>5,867,330.93</u>
	\$29,432,005.93
Less - Transferred to	
Nova Scotia Operations	<u>3,096,702.67</u>
	<u>\$26,335,303.26</u>

(That is because of the interlocking of Dominion and Cumberland).

Nova Scotia (Mainland) Operations

Acadia Coal Co. Ltd.,	\$ 2,916,838.63
Cumberland Railway & Coal Co.,	3,829,943.39
Greenwood Coal Co. Ltd.,	59,573.86
Hillcrest Mining Co. Ltd.,	109,547.60
Intercolonial Coal Co. Ltd.,	1,655,942.94
Joggins Coal Co. Ltd.,	141,837.61
Standard Coal Co. Ltd.,	<u>-41,901.28</u>
	<u>\$ 8,671,782.75</u>

Represented by:

AssetsProperties

Depreciable	\$6,478,739.80	
Less Reserve for depreciation	<u>3,982,440.28</u>	\$2,496,299.52
Non-depreciable	3,871,809.76	
Less Reserve for depletion	<u>621,044.39</u>	3,250,765.37
Net Current Position		2,799,508.11
Deferred		<u>125,209.75</u>
		<u>\$ 8,671,782.75</u>

Equity Capital

Common Shares	\$ 3,091,100.00
Preferred Shares	3,197,300.00
Bonds	85,000.00
Transferred from Cape Breton Operations	<u>3,096,702.67</u>
	\$ 9,470,102.67
<u>Loss</u> Deficits (Net)	<u>798,319.92</u>
	<u>\$ 8,671,782.75</u>

Operating Results (Specified Years)

Submitted herewith are summaries showing the net operating results for specified years, from the Coal operations on Cape Breton Island, and on the Mainland of Nova Scotia. These are the results as shown by the books of the Companies as detailed in our explanatory reports.

The results for the year 1944 are shown with the subsidies claimed or received included, and also the results excluding the subsidy claims.

(By that I refer to the subsidies of the Emergency Coal Production Board).

Summary of Profit and Loss AccountShowing net results before Income Tax for specified yearsCape Breton Island

	<u>1930</u>	<u>1935</u>	<u>1939</u>
Dominion Coal	\$ -312,483.30	\$ 489,303.80	\$ 740,644.21
Old Sydney	-414,038.99	17,078.17	16,646.52
Bras d'Or Coal	5,165.48	-2,244.86	-3,991.97
Indian Cove	16,041.55	900.92	16,603.62
Sullivan Coal	---	---	---
	<u>\$ -705,315.26</u>	<u>\$ 505,038.03</u>	<u>\$ 769,902.38</u>

1944
Including
Subsidies
claimed or received

1944
Excluding
Subsidies

Dominion Coal	\$ 758,824.49	\$ -5,491,211.90
Old Sydney	15,974.01	15,974.01
Bras d'Or Coal	-55,437.67	-55,437.67
Indian Cove	3,318.73	-9,163.80
Sullivan Coal	<u>-389.02</u>	<u>-8,955.39</u>
	<u>\$ 722,290.54</u>	<u>-5,548,794.75</u>

Nova Scotia (Mainland)

	<u>1930</u>	<u>1935</u>	<u>1939</u>
Cumberland Rly.	\$ 163,059.19	\$ 13,789.27	\$ -6,278.55
Acadia Coal	87,418.77	-287,377.02	-137,911.58
Greenwood	416.10	-1,630.51	-4,926.97
Hillcrest	---	---	---
Intercolonial	40,001.79	44,268.74	61,655.19
Joggins Coal	---	---	---
Standard Coal	---	---	---
	<u>\$ 290,895.85</u>	<u>\$ -230,949.52</u>	<u>\$ -87,461.91</u>

	1944 Including Subsidiaries claimed or received	1944 Excluding Subsidiaries
Cumberland Rly.	\$ 103,972.50	\$ -861,419.07
Acadia Coal	5,000.00	-987,638.92
Greenwood	-23,472.53	-63,229.85
Hillcrest	-14,109.85	-45,621.14
Intercolonial	35,486.05	-50,563.61
Joggins Coal	19,865.89	19,865.89
Standard Coal	<u>-3,122.64</u>	<u>-17,288.22</u>
	<u>\$ 123,619.42</u>	<u>\$ -2,005,894.92</u>

The undernoted is a summary of the production tonnage, manshifts, and production per man for the four years 1930, 1935, 1939 and 1944.

Cape Breton Companies

<u>Production</u> <u>Tonnage (Long Tons)</u>	<u>1930</u>	<u>1935</u>	<u>1939</u>	<u>1944</u>
Dominion	3,439,614	3,249,457	4,016,345	3,000,932
Old Sydney	506,368	544,508	608,489	609,688
Bras d'Or	108,950	93,693	111,459	131,396
Indian Cove	45,680	43,482	56,590	32,588
Sullivan	<u>---</u>	<u>---</u>	<u>---</u>	<u>10,300</u>
	<u>4,100,612</u>	<u>3,931,140</u>	<u>4,792,883</u>	<u>3,784,904</u>

Tons decreased 1939/1944- 1,007,979
" " Percentage 21%

Shifts

Dominion	1,528,500	1,454,395	1,667,267	1,984,868
Old Sydney	308,965	304,146	327,774	338,927
Bras d'Or	46,552	34,542	51,152	85,216
Indian Cove	25,202	24,600	26,835	20,990
Sullivan	<u>---</u>	<u>---</u>	<u>---</u>	<u>7,196</u>
	<u>1,909,219</u>	<u>1,817,683</u>	<u>2,073,028</u>	<u>2,437,197</u>

Manshifts increased 1939/44 - 364,169

" " Percentage 17.5%

S.	-3951-	<u>K. J. Morrison</u>		
<u>Production per man</u>	<u>1930</u>	<u>1935</u>	<u>1939</u>	<u>1944</u>
Dominion	2.25	2.23	2.41	1.52
Old Sydney	1.64	1.79	1.86	1.80
Bras d'Or	2.34	2.71	2.18	1.54
Indian Cove	1.8	1.9	1.9	1.4
Sullivan	--	--	--	1.8

<u>Nova Scotia (Mainland) Companies</u>				
<u>Production</u>				
<u>Tonnage (Long Tons)</u>	<u>1930</u>	<u>1935</u>	<u>1939</u>	<u>1944</u>
Cumberland	566,496	452,895	547,484	531,649
Acadia	452,459	350,287	409,833	315,678
Greenwood (x)	23,043	46,902	35,853	27,857 (x)
Hillcrest	---	---	---	78,766
Intercolonial	150,172	128,731	169,899	143,774
Joggins	---	---	---	106,953
Standard	---	---	---	64,731
(x) Greenwood not included				
Total	<u>1,169,127</u>	<u>931,913</u>	<u>1,127,216</u>	<u>1,241,551</u>

Tons increased 1939/44 - 114,335

" " Percentage - 10.14%

Shifts

Cumberland	341,118	266,532	308,595	391,338
Acadia	311,348	275,820	275,440	305,167
Hillcrest	--	--	--	42,833
Intercolonial	119,930	92,864	115,023	103,203
Joggins	--	--	--	46,071
Standard	---	---	---	34,741
	<u>772,396</u>	<u>635,216</u>	<u>699,058</u>	<u>923,353</u>

Manshifts increased 1939/44 - 224,295

" " Percentage - 32%

<u>Production per man</u>				
Cumberland	1.70	1.70	1.77	1.36
Acadia	1.44	1.27	1.49	1.03
Hillcrest	--	--	--	1.84
Intercolonial	1.32	1.46	1.57	1.49
Joggins	--	--	--	2.32
Standard	--	--	--	1.86

Sale Price and Mining Costs

The undernoted is a comparison of the net sale price at the mine, based on tons sold, with the pithead costs, on basis of tons produced, as shown by the records of the various Companies:-

Cape Breton Companies

<u>Net Sale Price at Mine</u>	<u>- Basis - Tons sold</u>			
<u>per ton (Overall)</u>	<u>1930</u>	<u>1935</u>	<u>1939</u>	<u>1944</u>
Dominion	\$ 4.060	\$ 3.839	\$ 4.057	\$ 5.692
Old Sydney	4.638	3.946	4.307	6.572
Bras d'Or	3.94	3.70	3.68	5.49
Indian Cove	4.36	3.58	3.62	4.89
Sullivan	---	---	---	5.23

Mining Costs - Production

Dominion	\$ 4.082	\$ 3.732	\$ 3.821	\$ 7.455
Old Sydney	5.135	4.485	4.271	6.381
Bras d'Or	3.910	3.750	3.950	5.987
Indian Cove	3.840	3.267	3.166	5.180
Sullivan	---	---	---	6.10

Nova Scotia(Mainland) Companies

<u>Net Sale price at mine</u>	<u>- Basis - Tons sold</u>			
<u>per ton (Overall)</u>	<u>1930</u>	<u>1935</u>	<u>1939</u>	<u>1944</u>
Cumberland	\$ 5.074	\$ 4.528	\$ 4.650	\$ 6.576
Acadia	5.381	4.506	4.440	6.337
Greenwood	5.000	4.74	4.92	6.89
Hillcrest	--	--	--	4.91
Intercolonial	5.03	4.48	4.37	6.34
Joggins	--	--	--	4.88
Standard	--	--	--	4.57

Mining Costs - Production

	<u>1930</u>	<u>1935</u>	<u>1939</u>	<u>1944</u>
Cumberland	\$ 4.510	\$ 4.388	\$ 4.571	\$ 7.889
Acadia	5.300	5.297	4.626	10.353
Greenwood	5.12	4.84	4.74	9.18
Hillcrest	--	--	--	4.698
Intercolonial	4.956	4.353	4.186	6.861
Joggins	--	--	--	4.601
Standard	--	--	--	4.754

Depreciation

Dominion Coal Co. Ltd.,
 Cumberland Railway & Coal Co.,
 Sydney and Louisburg Railway,
 Dominion Rolling Stock Co. Ltd.

- - - - -

In the mining costs of these two coal companies, a charge of 20 cents per ton is made as a provision for depreciation on Plant and Equipment. In the Profit and Loss account for the year, the amount charged to mining costs is reversed or cancelled.

In the case of the Dominion Company, depreciation is provided on the depreciable assets at rates varying from one to ten per cent and on Sinkings and Openings on a tonnage basis.

The amount for Cumberland is based on five per cent of the gross book value of the depreciable assets.

A comparison of the amounts in the various accounts for the year ended 31st December, 1944, is given hereunder:-

<u>Company</u>	<u>Mining Costs</u>	<u>Profit & Loss Account</u>	<u>Credit Property Ledger</u>
Dominion	\$ 600,186.40	\$649,694.03	Depreciation \$537,085.75 Depletion <u>112,608.28</u>
Cumberland	106,329.80	<u>213,305.97</u>	Depreciation <u>213,305.97</u>
		\$ 863,000.00	
S. & L. Rly. (Dominion)	-	175,000.00	Depreciation 96,461.36 Depletion <u>78,538.64</u>
Rolling Stock Co. -		<u>212,000.00</u>	Depreciation <u>212,000.00</u> Depreciation 1,058,853.08
	<u>\$ 706,516.20</u>	<u>\$1,250,000.00</u>	Depletion <u>191,146.92</u> <u>\$1,250,000.00</u>

The charge of \$175,000.00 to the Profit and Loss account re the assets of the S. & L. Railway, represents a portion of the annual rental paid by S. & L. to Dominion for the use of its Railway facilities, and was explained in our report on Dominion Coa affairs at page 14(a).

BY MR. MORRISON - This is merely the result of the operations for these years in the different periods referred to, 1930, 1935, 1939 and 1944, and on page 18 we show the subsidies included, and excluded, and the second column of figures are for the Nova Scotia Mainland.

BY MR. FRAWLEY - You show the full amount of subsidy claimed as shown by the books of the Company.

A. Yes, claimed, or received in some cases, but the majority are as claimed. And turning to page 19, production comparison. In the Cape Breton Companies the tonnage decreased in the period 1939/1944 by 1,007,979 tons, representing 21% reduction. And the man shifts increased between 1939 and 1944 by 364,169 shifts, that is a percentage of 17 $\frac{1}{8}$ %. Production per man in the Cape Breton Companies is shown for the four years. And on page 20 the same material is given for the other companies on the Mainland. And again speaking to the production, comparing 1939 with 1944, the

tonnage increased by 114,335 tons which represents 10.14% of an increase. The shifts increased between the two years by 224,295 shifts, or a percentage increase of 32%. Then production per man is shown wherever the information was available. Page 21 gives some particulars on mining costs; comparison of the net sale price at the mine based on the tons sold, with the pithead cost based on tons produced as shown by the records of the various Companies. Net sale price at the mine is the overall picture.

Q. When you say "overall" it means all kinds of coal?

A. Yes.

Q. Just Nova Scotia Mainland Companies are shown on the same basis?

A. Yes, and on page 23 are the mining costs for the same years.

Perhaps it might be advisable to read that in order to explain it.

The Companies are first shown, and then the amount charged in the mining costs, and then the amount in Profit and Loss account, and

in the last column the Credit Property Ledger in respect to the

assets being depreciated. In the property ledger that is

depreciated on 5% of gross value, or \$213,305.97, which is the

amount in the Property Ledger. It is segregated in the property

Ledger for Depreciation and Depletion, \$537,085.75 for Depreciation,

and \$112,608.28 for Depletion.

Q. S. & L. Railway does not own or mine coal?

A. No, it is an operation of the Dominion Coal, but it is in

respect to the physical properties of the S. & L. Railway which

is owned and operated by the Dominion Company. At the time I

wrote this, I anticipated that that the Reports would have been

put in before I presented this Report.

MR. MORRISON continues Report

The actual depreciation on these properties for 1944 was \$96,461.36, based on rates varying from one percent to ten percent on depreciable assets. The balance as noted on the above summary is regarded as depletion of coal areas of the Dominion Company.

The charge of \$212,000.00 for the Rolling Stock Company is based on the annual payment of principal on the serial bonds,

S.

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K. J. Morrison

issued in respect of these cars. --- For the year 1944 these payments were as follows:

<u>Bonds Due</u>	<u>No. of Years</u>	<u>Amount</u>
1945	8	\$ 26,000.00
1947	5	68,000.00
1947	8	53,000.00
1944	3	<u>65,000.00</u>
		<u>\$ 212,000.00</u>

These payments have no relation to the actual depreciation on the cars, but where the term of the bonds is related to the life of the asset, this (Sinking Fund) method of depreciation is often used. In this case, however, we are of the opinion that the depreciation charge is excessive, and should be related to the expected life of the asset.

The gross book value of the depreciable assets of Dominion Coal and subsidiaries, after eliminating obsolete and fully depreciated assets, amounted to \$22,472,070.74 as at 31st December, 1944. The total depreciation for the year as recorded in the property ledgers of the Company was \$1,058,853.08, or 4.7% of the gross value.

As at 31st December, 1944, the reserve set up against the depreciable assets of \$22,472,070.74 was \$12,295,417.33 or 54.7%.

On the present basis of depreciation, the depreciable assets, viz. Plant, Equipment and Development, will be fully written off in a further 9.7 years.

The rates of depreciation adopted by the Company are not in excess of those allowed by the Dominion Income Tax Division. We feel, however, that for the purposes of your Commission, Engineering opinion should be hand as to the rate at which these properties should be depreciated.

Depletion

In accordance with the Agreement with Nova Scotia Steel and Coal Co. Ltd., Old Sydney Collieries Ltd. charges its

mining costs with ten cents per ton depletion. As mentioned in our explanatory report, Acadia has charged mining costs with amounts for both depreciation and depletion. The Dominion Coal and Cumberland only charge their mining costs with a provision for depreciation at 20 cents per ton.

For purposes of Income Tax, the Income Tax Division allows a depletion charge of 10 cents per ton regardless of the ownership of the leases. The Department does not concern itself with the amount paid - (that is for the leases) - and does not require the depletion entries to be made in the records of the claiming company.

As a consequence of these regulations, there is no uniformity in the recording of depletion in the books of account.

The Emergency Coal Production Board has issued instructions with regard to depletion, which require, in effect, that depletion will only be allowed on the cost of the coal areas. The Board also requires definite information on the cost, before any depletion is allowed.

We are of the opinion that where the coal areas have been purchased, depletion is a proper operating cost to the extent of the amortization of that cost. Where the coal areas are leased on a royalty or rental basis, any allowance for depletion can only be regarded as part of the Profit and Loss account, representing a risk return on the Capital invested.

Depreciation and Depletion - Various Companies

The following is a summary of the depreciation and depletion taken by the other Companies under review:-

- | | | |
|-----------------------|---|---|
| <u>Bras d'Or Coal</u> | - | Depletion at 10 cents per ton for all years. |
| <u>Co. Ltd.</u> | - | Depreciation taken only during the years 1942, 1943 and 1944 at varying rates together with special depreciation on new equipment purchased during the War years. |

Indian Cove Coal - Depletion is not set up, and depreciation is
Co. Ltd. taken on a 10% basis.

Old Sydney - For the period prior to 1st August, 1938,
Collieries Ltd. depreciation is entered at 20 cents per ton.
For the subsequent period the following has
been charged:

1938 & 1939 - 20 cents per ton, of which
\$60,000.00 is paid to Nova
Scotia Company, and the balance
credited to the Contingent
Reserve.

1940 & 1941 - Rental to Nova Scotia.

1942, 1943 & 1944 - Rental and depletion
paid to Nova Scotia.

BY COMMISSIONER MORRISON - When you say Nova Scotia, you mean
the Nova Scotia Steel & Coal Co.?

A. That is correct, Commissioner Morrison.

Sullivan Coal - No depletion is charged, and depreciation
Co. Ltd. taken at 10%.

Acadia Coal - 20 cents per ton charged to mining costs, which
Co. Ltd. is later reversed and an annual fixed amount of
\$120,000.00 provided for depreciation and
depletion up until 1941. Thereafter depletion
is set up at 10 cents per ton and depreciation
at 5% on the remaining depreciable plant.

Greenwood Coal - Enter depletion at 10 cents per ton, and take
Co. Ltd. depreciation in round annual amounts varying
from \$1,750.00 to \$5,000.00.

Hillcrest Mining - No depletion is provided and depreciation is
Co. Ltd. set up in the books at rates varying from
5% to 20%.

- Intercolonial - Depletion is charged at 10 cents per ton.
Coal Co. Ltd. Depreciation is provided at 10 cents per ton with the exception of some years when extra provision is made.
- Joggins Coal - Depletion is charged at 10 cents per ton and
Co. Ltd. depreciation at varying rates.
- Standard Coal - Depletion at 10 cents per ton and depreciation
Co. Ltd. at varying rates are entered on the books.

From the foregoing summary it will be appreciated that in order to have comparable records, all of these accounts will have to be put on a uniform basis. Pending further consideration of this question, no amended statements have been prepared.

General

It will be appreciated that the financial position of the coal industry in Nova Scotia has been under consideration for many years, and is a very involved problem. Owing to many changes in the financial organization of the major companies, we have found great difficulty in reducing the amount of material to be presented.

We felt, however, that in order to study this whole matter it was necessary to present a large amount of detail.

We have endeavored to present the facts as disclosed by the records and have made such explanations and observations as we hope will enable your Commission to obtain a proper view of the financial position.

As mentioned previously, our examination has covered a period of fifteen years, and the obtaining of the necessary information has meant additional work on the part of the Companies involved.

We would say to your Commission that we have received every assistance from all concerned, and would express our sincere appreciation for all courtesies extended.

(sgl)Harvey, Morrison & Co.

Chartered Accountants.

September 17, 1945.

BY MR. FRAWLEY: I think before there is any examination or cross-examination on that, that we should proceed to put in the Exhibits 205, 206, 207 and 208. Exhibit 205 is a supplementary note on the accounts of the Dominion Coal?

MR. MORRISON: That's right. Now in connection with this report, Mr. Chairman and Mr. Commissioner, there are certain small typographical errors that have been drawn to our attention, and I think the majority of the copies have been adjusted--the matter of a year or a date, but as I come to these small adjustments I will make reference to them.

MR. MORRISON proceeds to read Exhibit 205:

DOMINION COAL COMPANY LIMITED
CUMBERLAND RAILWAY AND COAL COMPANY
SYDNEY AND LOUISBURG RAILWAY
DOMINION ROLLING STOCK COMPANY LIMITED

R E P O R T

HISTORY OF CAPITAL STOCK AND BOND ISSUES

Dominion Coal Company Limited

was incorporated in 1893, and acquired from Mr. H. M. Whitney, all the real and personal property, including Coal Mines and Equipment, Coal Leases, Railways, Rolling Stock, Ships, Piers, etc., of:-

Caledonia Coal and Railway Company	Point Aconi Coal Areas
Gardiner Coal Mining Company	Sword Areas
International Coal Company Limited	Minghear Areas
Old Bridgeport Mining Company	John White Areas
Gowrie Collieries	Agreements with:-
Glace Bay Mining Company	General Mining Association Limited
Ontario Coal Mining Company	Low Point Barrasois and Lingan Mining Company
Black Diamond Steamship Company	

At that date the company issued the following capital stock:-

30,000 8% Preferred Shares,	
of a Par Value of \$100.00 each	\$3,000,000.00
150,000 Common Shares,	
of a Par Value of \$100.00 each	15,000,000.00
	<u>\$18,000,000.00</u>

For the properties described above, and the sum of \$118,750.00 cash, Mr. Whitney received:-

	<u>Par Value</u>
15,000 8% Preferred Shares	\$ 1,500,000.00
144,900 Common Shares	14,490,000.00
4,750 do.	475,000.00
	<u>\$16,465,000.00</u>

The remaining preference shares were sold to the public, and it is indicated from minutes of directors' meetings that 5,000 shares were sold in 1896 at \$91.00, and the 10,000 were offered in 1900 at \$110.00 per share.

In 1893, Dominion also authorized an issue of

\$3,000,000.00, First Mortgage, 6%, 20 Year bonds, and sold \$1,500,000.00, realizing a price of \$92.00 per \$100.00 principal amount. The proceeds of this bond sale were used for the purchase of machinery and equipment and the extension of the Sydney and Louisburg Railway from Bridgeport to Louisburg, a distance of approximately twenty-five miles.

Additional bonds of this series were issued between 1st March, 1893 and 31st December, 1897, amounting to \$1,500,000.00, the company realizing \$93.00 per \$100.00, and using the proceeds for capital expenditures. Between 1897 and 1905, bonds of this issue were retired by sinking fund payments, to the amount of \$565,000.00.

In 1905, the company issued 30,000 shares of 7%, Cumulative, Preferred stock, of a par value of \$100.00 each, for the purpose of retiring the 8% Preferred issue then outstanding. Holders of the old issue had the option of exchanging share for share or turning them in at a redemption price of \$115.00 per share. The price to the public for the new issue was \$125.00 per share. Underwriters were allowed a commission of five per cent on sales to the public and two and one-half per cent on shares exchanged. Dividends were paid regularly on this stock up until 31st October, 1923, and no further dividends were paid until 1934, when a compromise arrangement was made, which is described below.

At the same date in 1905, a further bond issue of \$7,000,000.00, 5% First Mortgage, 35 Year bonds was authorized, of which \$5,000,000.00 was issued 1st May, 1905, at a price of 94. The proceeds were used to retire the amount of 6% bonds then outstanding, amounting to \$2,435,000.00 at a premium of ten per cent, and to retire notes outstanding in favour of the Dominion Iron and Steel Company of \$2,380,000.00. These notes arose through capital expenditures for the improvement and extension of the coal properties while held under lease by the Dominion Iron and Steel Company during the years 1902 and 1903.

Under the provisions of the agreement securing the bonds, the company was authorized to issue additional bonds to cover seventy-five per cent of expenditures for the improvement and extension of the property. Additional bonds, amounting to \$2,000,000.00, were issued between the years 1909 and 1911, at par less a discount of \$117,812.50, the company realizing \$1,882,187.50.

During the period from 1905 to 1935, bonds to the amount of \$4,512,500.00 were retired by sinking fund payments.

In 1912, the Dominion Steel Corporation sold to the public, 6% Preference shares to the amount of \$7,000,000.00, the proceeds being equally divided between the Dominion Coal Company and Dominion Iron and Steel Company Ltd. The Dominion Coal, for its share of the proceeds, namely \$2,916,205.69, issued \$3,500,000.00 in 6% Income bonds to Dominion Steel Corporation, at an average price of \$83.32 per \$100.00 par. The proceeds were used for capital expenditures, principally made in the opening of collieries in the Waterford district.

On 1st October, 1934, a compromise arrangement was made with the holders of the preferred and common stock, and approved by the Supreme Court of Nova Scotia, whereby the outstanding capital stock, consisting of:-

30,000 Shares	7% Cumulative Preferred of \$100.00 each	\$ 3,000,000.00
150,000 "	Common, of \$100.00 each	15,000,000.00
		<u>\$18,000,000.00</u>

was changed into:-

400,000 Shares	6% Cumulative Preferred of \$25.00 each	\$10,000,000.00
480,000 "	Common, of \$25.00 each	12,000,000.00
		<u>\$22,000,000.00</u>

of which were issued, as explained below:-

240,000 Shares	6% Cumulative Preferred, of \$25.00 each	\$ 6,000,000.00
480,000 "	Common, of \$25.00 each	12,000,000.00
		<u>\$18,000,000.00</u>

As will be seen from the above, the compromise had the effect of reducing the Common by \$3,000,000.00 and increasing the Preferred by a like amount.

The 240,000 shares of the new 6% issue were given to the holders of the old 7% Preferred shares in exchange for their shares and to cover dividends in arrears to 31st October, 1934. The balance of 160,000 shares has not been issued to date.

The old Preferred shareholders thus received in par value of new shares:-

in exchange for 7% Securities	\$ 3,000,000.00
for Arrears of Cumulative Interest from 31st October, 1923 to 31st October 1934 - 11 years at 7%, or 77%	2,310,000.00
for a Bonus for Non-payment of Interest on Due Date and for Reduction in In- terest Yield, or 23%	690,000.00
	<u>\$ 6,000,000.00</u>

The Common shareholders received 480,000 shares of the new stock for a total par value of \$12,000,000.00 in exchange for 150,000 shares of the old, having a total par value of \$15,000,000.00.

A summary of the capital and bond transactions as at 31st December, 1934, is as follows:-

<u>Preferred</u>	Issued for Cash, 1893 - 8%	\$ 1,500,000.00
	Issued for Properties, 1893 - 8%	1,500,000.00
		<u>\$ 3,000,000.00</u>
	Exchanged for New Shares 1905 - 7% (Dividends paid regularly, 1905 to 1923)	<u>\$ 3,000,000.00</u>
	Exchanged for New Shares 1934 - 6% with an additional issue covering Arrears of Cumu- lative Interest and Bonus	\$ 3,000,000.00
		<u>3,000,000.00</u>
		<u>\$ 6,000,000.00</u>
<u>Common</u>	1893 Issued for Properties	<u>\$15,000,000.00</u>
	1934 Exchanged for New Issue	<u>\$12,000,000.00</u>
<u>Bonds</u>	<u>6% 20 Year Bonds, First Mortgage</u>	
	1893 Sold at 92	\$ 1,500,000.00
	1893-	
	1897 Sold at 93	1,500,000.00
		<u>\$ 3,000,000.00</u>
	1897-	
	1905 Retired by Sinking Fund	565,000.00
	1905 Retired by Proceeds of New Issue	<u>\$ 2,435,000.00</u>

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<u>Bonds</u> <u>(cont'd)</u>	
<u>5% 35 Year Bonds, First Mortgage</u>	
1905 Sold at 94	\$ 5,000,000.00
(Retired 6% Issue \$2,435,000)	
(Retired Notes to Dosco 2,380,000)	
1905-	
1912 Sold at Par	2,000,000.00
	\$ 7,000,000.00
<u>Less</u> Retired by Sinking Fund Payments	4,512,500.00
Outstanding, 31st December, 1934	\$ <u>2,487,500.00</u>
<u>6% Income Bonds</u>	
1912 Issued to Dominion Steel for \$82.50	\$ <u>3,500,000.00</u>

In 1935, the 6% Income bonds of \$3,500,000.00 were replaced by 6% Sinking Fund debentures.

A further issue of \$12,000,000.00 in First Mortgage bonds was authorized in 1937.

On 1st October, 1937, the following bonds were issued:-

Series A. First Mortgage Serial Bonds, $3\frac{1}{2}\%$, to mature 1st October, 1943	\$ 3,000,000.00
Series A. First Mortgage $4\frac{1}{2}\%$, 15 Year bonds, maturing 1st October, 1952	3,000,000.00
	\$ <u>6,000,000.00</u>

These bonds were sold for 96, and the proceeds used to retire the 5% and 6% bonds outstanding which, at the end of 1936, stood at \$5,192,000.00 and for the purchase of the capital stock of the Cumberland Railway and Coal Company from Dominion Steel and Coal Corporation.

On 1st October, 1939, a further issue of the $4\frac{1}{2}\%$ First Mortgage bonds was made, in the amount of \$1,500,000.00, at a price of \$96.65, the proceeds being used to provide the Cumberland Railway and Coal Company with the cash to retire their 5% First Mortgage bonds, due in 1940, and which stood at \$2,148,000.00 at the end of 1939.

The \$3,000,000.00, Series A., $3\frac{1}{2}\%$ bonds, due 1st October, 1943, were retired in full during the years 1938 to 1943. In 1944, the $4\frac{1}{2}\%$ Mortgage bonds were reduced by \$76,000.00, leaving the balance outstanding at 31st December, 1944, of \$4,424,000.00.

Ownership of Capital and Bonds, 31st December, 1944

Common Stock	<u>\$12,000,000.00</u>	owned by Dominion Steel and Coal Corporation Ltd.
Preferred Stock	\$ 401,200.00	owned by Dominion Steel and Coal Corporation Ltd.
	4,958,775.00	owned by Public
	<u>\$ 5,539,975.00</u>	
First Mortgage Bonds, Series A., $4\frac{1}{2}\%$, due 1st October, 1952	<u>\$ 4,424,000.00</u>	owned by Public

During the years 1938 to 1944, Preferred stock, totaling \$640,025.00, has been redeemed at a cost of \$467,486.43, or an average price of 73. The resulting surplus, of \$172,538.57, has been credited to a reserve, the particulars of which are shown later in this report.

Cumberland Railway and Coal Company

The Capital stock of Cumberland Railway and Coal Company was purchased by Dominion Steel Corporation as at 1st November, 1910. The stock consisted of 20,000 shares of \$100.00 each.

The Cumberland Company had outstanding, as at that date, \$979,000.00 in principal of 6% First Mortgage bonds.

The Cumberland shareholders received three shares of Dominion Steel Corporation for each ten of the old company, together with \$6.00 in cash, or a total of \$12,000.00.

The bondholders received \$1,200.00 of new 5% First Mortgage bonds for each \$1,000.00 of old 6% bonds. A total of \$2,000,000.00 in new bonds was issued out of an authorization of \$3,000,000.00, for the following consideration:-

To redeem outstanding 6% bonds, \$1200.00 for \$1000.00	\$ 1,174,800.00
To be issued to Dominion Coal Company Limited, for additions and extensions to Property	825,200.00
	<u>\$ 2,000,000.00</u>

The bonds were guaranteed, both as to principal and interest, by the Dominion Steel Corporation. Bonds given to Dominion Coal in exchange for capital expenditures were priced at 90.

Under the Trust Deed, the balance of the amount authorized could be issued to reimburse the Dominion Coal Company for 75% of the amount spent in additions and extensions to properties of the Cumberland Company. During the period 1912 to 1922, bonds were issued under this provision to the amount of \$1,000,000.00.

The Trust Deed securing the bonds provides for an annual Sinking Fund payment of \$30,000.00 on a total amount of \$3,000,000.00. When less than the full amount was issued the annual Sinking Fund amount was reduced in proportion. Under this provision, bonds to the amount of \$852,000.00 were redeemed between 1st October, 1910 and 1st October, 1940, on which latter date the remaining bonds outstanding of \$2,148,000.00 were redeemed. Funds necessary were supplied by the Dominion Coal Company, which had purchased the Capital stock of Cumberland in August, 1937.

At the end of 1944, Cumberland operates three mines, namely Numbers 1, 2, and 4, at Springhill, Cumberland County, Nova Scotia, and also owns a railway which connects with the C.N.R. at Springhill Junction and extends to Parrsboro, Nova Scotia.

Sydney and Louisburg Railway Company

The Capital stock of the Railway Company consists of 368 shares of \$100.00, \$36,800.00, all owned by Dominion Coal Company Limited. The assets represented by the shares issued is the value placed on land to an equal amount, which is the only capital asset carried on the books of the Sydney and Louisburg Railway.

Included in the properties of Dominion Coal, there is the amount of \$4,625,361.70, as at 31st December, 1944, representing the capital value of the assets of the railway. This value has been depreciated to a net figure of \$1,417,725.99 as at the same date.

The Dominion Company acquired these properties through

the original agreement with Mr. H. M. Whitney, which stated that any properties subsequently acquired by him after the negotiation of the original contract would be turned over to Dominion Coal at his cost.

The company operates, on lease, railway properties of the Dominion Coal. The line extends from connections with the C. N. R., at Sydney, to Louisburg, on Cape Breton Island.

While the railroad has some revenue other than that derived from associated companies, its operations should be considered as part of the coal operations of the Dominion Company. Due consideration will have to be given to the loss in the years 1942 to 1944 on the difference between the tariff rates and the special rates granted to the Steel Company.

Dominion Rolling Stock Company Limited

This Company was formed in 1934, to facilitate the financing of purchases of rolling stock, mainly steel hopper cars, which are leased to the Sydney and Louisburg Railway through the Dominion Coal Company. The Rolling Stock Company issues Equipment bonds to the Public, giving as collateral, the security of the asset and the guarantee of the Dominion Company.

There are, in addition to the Equipment bonds, Common shares issued to the amount of \$75,040.00, all of which are owned by the Dominion Coal Company Limited.

BALANCE SHEETS

In the attached statements Nos. 1 and 2 set forth the assets and liabilities of the Dominion Coal Company Limited and Subsidiaries for the years 1930 to 1944 inclusive.

Statements Nos. 3 to 10 inclusive show the details of each company and the consolidated figures as at the 31st December, 1944, 1943, 1942, 1941, 1940, 1939, 1935 and 1930.

A summary of the Balance Sheets as at selected dates is as follows:

W.

-3965-

K. J. MorrisonAssets31st December
193031st December
1935

Properties	\$41,214,186.58	\$41,597,590.02
Less Reserve for Depreciation	15,331,573.63	18,294,336.67
	<u>\$25,882,612.95</u>	<u>\$23,303,253.35</u>
Cash in Hands of Trustees	\$ 138,744.73	\$ 38,828.76
Investments in and Advances to Dominion Rolling Stock Company		\$ 75,040.00
Balance Receivable from Associated Companies		\$ 417,733.08
<u>Current</u>		
Inventories	\$ 2,622,712.18	\$ 2,144,881.95
Accounts Receivable less Reserve	1,831,763.21	1,865,023.21
Investments	1,550.00	15,100.00
Cash	403,080.42	325,612.60
	<u>\$ 4,859,105.81</u>	<u>\$ 4,350,617.76</u>
Deferred Charges	\$ 321,862.21	\$ 196,868.21
	<u>\$31,202,325.70</u>	<u>\$28,382,341.16</u>
	31st December 1939	31st December 1944
Properties	\$46,147,795.50	\$48,096,438.45
Less Reserve for Depreciation	22,326,492.30	26,729,417.68
	<u>\$23,821,303.20</u>	<u>\$21,367,020.77</u>
Cash in Hands of Trustees	\$ 80,047.70	\$ 640,795.22
Balance Receivable from Associated Companies	\$ 664,006.77	\$ 468,672.31
Accounts Receivable - Employees' Victory Loan		\$ 1,061,047.50
<u>Current</u>		
Demand Loan	725,000.00	
Inventories	\$ 3,047,086.86	\$ 2,867,351.41
Accounts Receivable less Reserve	\$ 3,048,857.73	\$11,078,135.19
Investments	31,060.00	354,800.00
Cash	1,013,441.62	476,821.16
	<u>\$ 7,865,446.21</u>	<u>\$14,777,107.76</u>
Deferred Charges	\$ 382,689.38	\$ 324,047.93
	<u>\$32,813,493.26</u>	<u>\$38,638,691.49</u>

Liabilities31st December
193031st December
1935Capital Stock

Common

\$15,000,000.00

\$12,000,000.00

Preferred

\$ 3,000,000.00

\$ 6,000,000.00

First Mortgage

Bonds

\$ 3,629,500.00

\$ 5,597,500.00

Income Bonds

\$ 3,500,000.00

Current

Bank Loans

\$ 1,141,015.95

Accounts Payable

and Accrued

Liabilities

473,105.99

681,050.36

Wages Payable

and Accrued

166,975.77

Bond Interest

Accrued

61,183.34

114,702.57

\$ 1,675,305.28

\$ 962,728.70

Balances Payable

to Associated

Companies

\$ 1,887,311.31

\$ 115,919.39

Reserves

\$ 1,440,707.47

\$ 3,158,843.40

Surplus

\$ 1,069,501.64

\$ 547,349.67

\$31,202,325.70

\$28,382,341.16

31st December
193931st December
1944Capital Stock

Common

\$12,000,000.00

\$12,000,000.00

Preferred

\$ 5,658,725.00

\$ 5,359,975.00

First Mortgage

Bonds

\$ 6,500,000.00

\$ 4,424,000.00

Cumberland Railway

Bonds

\$ 2,148,000.00

Dominion Rolling

Stock Company

Bonds

\$ 1,124,000.00

\$ 519,000.00

Current

Bank Loans

\$ 7,800,000.00

Accounts Payable

and Accrued

Liabilities

\$ 1,093,541.05

\$ 1,155,706.07

Taxes Payable

and Accrued

253,528.92

Wages Payable

and Accrued

214,190.04

327,702.85

Bond Interest

Accrued

107,010.00

54,812.10

\$ 1,414,741.09

\$ 9,591,749.94

Special Loan re

Victory Bonds

\$ 1,061,047.50

Balances Payable

to Associated

Companies

\$ 376,893.13

\$ 30,639.84

Reserves

\$ 2,667,877.84

\$ 3,594,134.55

Surplus

\$ 923,256.20

\$ 2,058,144.66

\$32,813,493.26

\$38,638,691.49

The Balance Sheets as at 31st December, 1943 and 1944 are still tentative, depending on the claim of the Company for assistance from The Emergency Coal Production Board being accepted by that body.

Schedules Nos. 1 to 6, with subsidiary schedules, show in detail the following accounts appearing on the Balance Sheet as at 31st December, 1944:-

- Schedules No. 1 - Properties and Depreciation Reserve
- No. 2 - Inventories
- No. 3 - Accounts Receivable
- No. 4 - Investments
- No. 5 - Deferred Charges
- No. 6 - Reserves

Properties

- Schedules No. 1 - Summary of Fixed Assets and Depreciation as at 31st December.
- No. 1(A) - Details of Fixed Assets, 31st December 1944
- No. 1(B) - Details of Depreciation Reserve, 31st December, 1944
- No. 1(C) - Statement of Properties, showing Additions and Deductions, 1930-1944
- No. 1(D) - Details of Expenditure on Capital Account, 1932 to 1944

The Dominion Company and Subsidiaries provides an annual fixed amount for depreciation, as follows:-

1930 to 1935 inclusive	\$ 730,000.00 annually
1936	900,833.28
1937	1,077,000.00
1938	824,000.00
1939 and 1940	1,250,000.00 annually
1941	Nil
1942 to 1944	1,250,000.00 annually

In the books of the company, depreciation is taken on the properties, in rates varying from one to ten per cent on the values of the assets, and with the sinkings and openings being depreciated on a tonnage basis. The difference between the total so arrived at and the above fixed amount is regarded as depletion of the coal areas. The consolidated value of properties as at 31st December, 1944, showing the amount of depreciation and net value is as follows:-

	<u>Book Value</u>	<u>Depreciation or Depletion</u>	<u>Net Value</u>
<u>ASSETS</u>			
<u>Non-Depreciable</u>			
Coal Areas-Dominion	\$15,111,598.24	\$4,544,541.23	\$10,567,057.01
-Cumberland	300,000.00		300,000.00
Land	335,419.35	12,340.00	323,079.35
<u>Development</u>			
Tonnage Basis	2,914,109.22	1,573,437.71	1,340,671.51
<u>Depreciable</u>			
Basis 1%	1,842,638.67	842,108.52	1,000,530.15
2%	2,420,998.67	1,502,111.10	918,887.57
2½%	529,514.44	157,651.69	371,862.75
3%	322,581.54	240,364.47	82,217.07
4%	438,855.77	299,938.42	138,917.35
5%	11,241,950.30	6,114,870.08	5,127,080.22
10%	528,945.10	434,675.62	94,269.48
Sinking Fund	2,228,222.35	1,130,259.72	1,097,962.63
<u>Obsolete</u>	6,368,365.06	6,368,365.06	-
<u>Fully Depreciated</u>	3,508,985.06	3,508,754.06	231.00
<u>Construction</u>	4,254.68		4,254.68
	<u>\$48,096,438.45</u>	<u>\$26,729,417.68</u>	<u>\$21,367,020.77</u>

PROFIT AND LOSS STATEMENTS - DOMINION

Statements No. 11 - 1930 to 1935 - Depression Period
 No. 12 - 1936 to 1939 - Standard Period
 No. 13 - 1940 to 1944 - War Period

The results over the above years are tabulated as follows, before income tax and dividends:-

1930	\$ -312,483.30	1936	\$586,889.70	1940	\$ 980,422.62
1931	-1,350,556.34	1937	612,007.86	1941	-767,068.13
1932	-539,123.05	1938	522,188.04	1942	1,139,353.64
1933	155,392.55	1939	599,901.55	1943	1,220,479.46
1934	629,825.44			1944	1,374,241.36
1935	489,303.80	Average	<u>\$580,246.78</u>	Average	<u>\$ 789,485.79</u>
Average	<u>\$ -154,606.89</u>				

MR. MORRISON: I want to point out it has been brought to my attention, and it is correct, that while the statements that are referred to are correctly summarized on this statement on page 12, the years 1942, 1943 and 1944 should be reduced, because we have included in those amounts the subsidy that has been claimed for Dominion Coal, including the loss on the Sydney and Louisburg Railway, so I would suggest that for those years the figures should be as follows: For 1942, \$408,217.05. I have given you the wrong figure. The figure that I am giving you is the Sydney and Louisburg loss, which ought to be con-

sidered with these figures.

For 1942	-	\$408,217.05
1943	-	467,198.44
1944	--	615,416.81

MR. MORRISON continues Report:

The above summary includes claims for assistance to the Emergency Coal Production Board, as undernoted, all of which have not been finally settled:-

1942	\$1,398,325.88	
1943	3,599,515.38	
1944	6,250,036.39	<u>\$11,247,877.65</u>

BY MR. FRAWLEY: Do the records of the company show that the 1942 claim has been settled?

MR. MORRISON: Not at the date that we examined them.

(Continues Report):

Dividends have been paid, as follows:-

1935	\$	360,000.00	
1936		451,200.00	
1937		360,000.00	
1938		352,809.75	
1939		343,695.57	
1940		331,780.00	
1941		164,909.25	
1943		409,574.92	<u>\$ 2,773,969.49</u>

Income Tax has been provided in the years:-

1936	\$	90,000.00	
1939		200,000.00	
1940		600,000.00	
1942		138,515.16	
1943		250,000.00	<u>\$ 1,278,515.16</u>

with an additional \$400,000.00 transferred from Reserve for Renewals and Betterments in the year 1937.

BY MR. FRAWLEY: You mean that they took \$400,000.00 from their Renewals Reserve and used it to pay income tax with?

MR. MORRISON: They transferred the amount to provide for income tax. That is correct. (Continues Report):

PROFIT AND LOSS STATEMENTS -
CUMBERLAND RAILWAY COMPANY

Statements No. 14	-	1930 to 1935
No. 15	-	1936 to 1939
No. 16	-	1940 to 1944

This Company shows the following results:-

1930	\$163,059.19	1936	\$ -6,993.23	1940	\$101,603.53
1931	127,484.77	1937	-144,523.37	1941	30,871.11
1932	121,096.05	1938	-63,514.89	1942	-123,003.07
1933	64,938.53	1939	-6,278.55	1943	181,591.24
1934	125,697.01			1944	103,972.50
1935	13,789.27	Average	<u>\$ -55,327.51</u>	Average	<u>\$ 59,007.08</u>
Average	<u>\$102,677.47</u>				

Included in the results are claims for assistance from the Emergency Coal Production Board, as follows:-

1942-1943	\$426,295.32	
1944	<u>965,391.57</u>	<u>\$1,391,686.89</u>

For the years 1930 to 1936, one-half the net earnings, less an annual rental of \$30,000.00, was credited, as revenue, from the Cumberland Company, in the books of the Dominion Steel and Coal Corporation. This item was deemed to be equivalent to depreciation. When the Dominion Coal Company purchased the shares in 1937, depreciation was charged in the Cumberland accounts as follows:-

1937, 1938, 1939	\$30,000.00 annually
1940	22,500.00
1941	Nil
1942	213,264.48
1943, 1944	213,305.97 annually

In the property ledger, depreciation was entered for

the year 1938	\$ 33,335.90
1939	209,466.51
1940	202,392.08

which would increase the profits made by Dominion, and increase the loss of Cumberland for those years by the following amounts:-

1938	\$ 3,335.90
1939	179,466.51
1940	179,892.08

SYDNEY AND LOUISBURG RAILWAY - 1937 to 1944

Statement No. 17 - Statement of Profit and Loss

DOMINION ROLLING STOCK COMPANY - 1937 to 1944

Statement No. 18 - Statement of Profit and Loss

The Sydney and Louisburg Railway pays an annual rental of \$280,000.00 to the Dominion Coal Company Limited for the use of the railway properties, including right-of-way, rolling stock, etc.

The railway assets are carried in the books of the Dominion Company with the exception of land, on which asset is placed a valuation of \$36,800.00, and for which the capital stock of the S. & L. Railway was issued to the Dominion Company.

In the records of the Dominion Company, the above annual rent of \$280,000.00 is allocated as follows:-

Interest	-	\$ 105,000.00
Depreciation	-	<u>175,000.00</u>
		\$ 280,000.00

In the detailed property ledger and depreciation record of the Dominion Company depreciation on the railways assets is set up annually at rates varying from 1% to 10%. The difference between this calculated depreciation and the \$175,000.00 is credited to the depletion reserve for coal areas in the accounts of the Dominion Company. This difference for the past four years is:-

1940	-	\$ 77,959.73
1942	-	46,128.93
1943	-	77,646.87
1944	-	<u>78,538.64</u>

In addition to the property mentioned above, new hopper cars are purchased by the Dominion Rolling Stock Company. The purchase of these cars is financed by the issuing of Sinking Fund Serial Bonds. The S. & L. Railway rents these cars through the Dominion Coal Company, and pays a rental charge which is based on the annual interest and sinking fund requirements of the serial bonds. After the bonds have been redeemed, title to the cars passes to the Dominion Coal Company.

The operations of these two subsidiaries are ancillary to the business of the Dominion Coal Company, and should be considered in conjunction therewith.

BY MR. FRAWLEY: The Sydney and Louisburg Railway Company, does it do any business? Yes, it carries ordinary traffic, doesn't it? Its business is not exclusive to the traffic of the Dominion Coal Company?

MR. MORRISON: Oh no. (Continues Report):

TUG OPERATION - BLACK DIAMOND LINE

A further ancillary operation is the tugs of the Black Diamond Line, which are owned by the Dominion Coal Company.

Shown in the property account is the capital cost of two tugs, namely the tugs Cruizer and Ascupart, of \$63,040.23, which cost has been fully depreciated. A further tug was chartered for the three years 1941, 1942 and 1943.

Schedule Miscellaneous - 5 details the operation of these tugs for representative years. The net results are included in "Miscellaneous Income" (Schedule Miscellaneous - 2) of the Dominion Company.

The results for those years are as follows:-

1936	\$ 7,236.81
1939	1,567.33
1940	3,984.78
1941	-14,091.24
1942	23,570.15
1943	-62,053.89
1944	-46,228.67

Included in the renewals and betterments reserve are the following charges for repairs:-

	<u>1939</u>	<u>1941</u>	<u>1942</u>	<u>1943</u>	<u>1944</u>
Tug Cruizer (Owned)	\$17,759.45	\$10,931.10	\$14,379.01	\$60,251.64	\$ 6,958.92
Tug Ascupart (Owned)		13,455.28	12,925.96	8,272.11	14,674.52
Tug Helena (Chartered)		44,373.13	14,172.21	9,056.86	

The major repairs to the Tug Cruizer, in 1943, we understand, have the effect of extending the life of this tug some years, but the total amount was charged as an expense in the one year.

SUMMARY OF SALES - Schedule "S" - 1 -
Dominion Coal

A summary of the percentage of tonnage sold to the public, as compared with that to the Steel Division and for company consumption, etc., is as follows:-

Sales to the Public			Sales to Steel Division		Company Consumption, etc.
Percent- age	Net Price Received		Percent- age	Net Price Received	
1930	69.346%	\$4.181	19.680%	\$3.698	10.974%
1931	76.422	4.021	12.340	3.661	11.238
1932	81.745	4.074	6.471	3.853	11.784
1933	77.267	3.959	12.373	3.321	10.360
1934	75.784	3.951	14.993	3.256	9.223
1935	72.886	3.983	18.084	3.272	9.030
1936	73.404	3.958	18.248	3.220	8.348
1937	74.051	4.068	18.541	3.537	7.408
1938	74.196	4.092	18.318	3.839	7.486
1939	76.280	4.180	16.435	3.591	7.285
1940	71.786	4.244	21.438	3.629	6.776
1941	67.687	4.278	23.672	3.953	8.641
1942	64.625	4.798	27.046	4.204	8.329
1943	64.901	5.198	25.083	4.218	10.016
1944	56.153	6.160	34.833	5.127	9.014

Sales to the Public - Schedules "S" - 2 and "S" - 3

The above schedules include sales to railways and commercial sales, with Schedule "S" - 2 summarizing the sales and Schedule "S" - 3 showing the details. It will be observed that on Schedule "S" - 2 a gross loss (sales less mining costs) is shown in latter years, reaching \$1.187 per ton in the year 1944.

Using representative years, the following variations are shown in the net price received at the mines:-

		High	Low
<u>Grade - Mine Run or Round</u>	1930	\$5.791	\$3.458
	1933	4.782	3.976
	1936	4.584	3.869
	1939	4.821	3.872
	1942	6.584	4.078
	1944	8.837	6.178
<u>Grade-Slack</u>	1930	\$4.210	\$2.716
	1933	3.969	3.062
	1936	4.513	3.210
	1939	4.216	3.094
	1942	5.812	2.370
	1944	7.534	4.230
<u>Grade - Nut</u>	1939	\$4.761	\$3.650
	1942	5.396	3.166
	1944	5.163	4.739

Note:- In using the above prices, sales to customers of low tonnages have been excluded.

Sales to Steel Division - Schedule "S" - 4

Under the heading of "Summary of Sales" the percentage of these sales to the total tonnage is shown with the net price

1. The first part of the report is a summary of the work done during the period covered by the report.

2. The second part of the report is a detailed account of the work done during the period covered by the report.

3. The third part of the report is a summary of the work done during the period covered by the report.

4. The fourth part of the report is a summary of the work done during the period covered by the report.

5. The fifth part of the report is a summary of the work done during the period covered by the report.

6. The sixth part of the report is a summary of the work done during the period covered by the report.

7. The seventh part of the report is a summary of the work done during the period covered by the report.

8. The eighth part of the report is a summary of the work done during the period covered by the report.

9. The ninth part of the report is a summary of the work done during the period covered by the report.

10. The tenth part of the report is a summary of the work done during the period covered by the report.

11. The eleventh part of the report is a summary of the work done during the period covered by the report.

12. The twelfth part of the report is a summary of the work done during the period covered by the report.

13. The thirteenth part of the report is a summary of the work done during the period covered by the report.

14. The fourteenth part of the report is a summary of the work done during the period covered by the report.

15. The fifteenth part of the report is a summary of the work done during the period covered by the report.

16. The sixteenth part of the report is a summary of the work done during the period covered by the report.

received being the average of run of mine and slack coal.

For the years 1930 to 1935, the sales statement shows an average price for both grades. From 1936 to 1940, run of mine is priced at fifty cents per ton higher than slack, and from 1941 to 1944, approximately fifty-four cents higher.

Using the above years, the prices are as follows:-

	<u>Run of Mine</u>	<u>Slack</u>
1930	\$3.698	\$3.698
1933	3.321	3.321
1936	3.634	3.134
1939	4.001	3.501
1942	4.636	4.096
1944	5.564	5.022

For the years 1935 on, the ratio of sales to the Steel Division is approximately four tons of slack to one ton of run of mine.

On Schedule "S" - 4, it will be observed that a loss is sustained by the Dominion Company in every year from 1930 to 1944, when the net selling value is compared with the mine cost. The totals are as follows:

Losses - 1930 to 1941 \$2,948,736.63

Subsidy Period -

Loss	1942	\$ 679,540.73
"	1943	1,472,786.66
"	1944	<u>2,483,559.02</u>
		4,635,886.41
Total Loss		<u>\$7,584,623.04</u>

The above loss is based on the costs as shown by the company records.

Sales to Associated Companies -
Schedules "S" - 5, "S" - 6 and "S" - 7

Sales to other companies are negligible, except in the year 1944, when 58,605 tons of slack and miscellaneous grade coal were sold to the Seaboard Power Corporation at a loss of \$85,813.43.

Company Operations or Consumption -
Schedules "S" - 8, "S" - 9 and "S" - 10

These sales represent the value placed on coal used in operations, and is included in mining cost.

Sales to Employees -
Schedules "S" - 11 and "S" - 11(A)

Run of mine, or round coal, is sold to employees, at a price below cost. On Schedule "S" - 11, the price includes an amount which has been charged to mining costs. Of late years, this has been one cent a ton on production, with the years 1943 and 1944 at two cents per ton. Schedule "S" - 11(A) shows the actual loss per ton, which varies from a low in 1936 of \$.318 to a high in 1944 of \$2.943. The total cost to the company over the fifteen year period amounts to \$963,656.13.

Sales Costs - Schedule "S" - 15

The above schedule summarizes the selling costs per ton and shows total expenses, after adjustment of inventories, as follows:

1930	\$1.281	1936	\$1.336	1940	\$1.655
1931	1.535	1937	1.403	1941	1.800
1932	1.640	1938	1.496	1942	1.732
1933	1.409	1939	1.458	1943	1.504
1934	1.404			1944	1.007
1935	1.324				

The cost Variation is mainly due to the variation in the destination of coal sold.

SUMMARY OF SALES - Schedule "S" - 17 -
 Cumberland

This Company sells approximately 90 per cent of its coal to the public, including railways and commercial sales, the remaining ten per cent being used for company consumption or for employees' sales.

Sales to the Public - Schedules "S" - 18 and "S" - 19

Using representative years, the average price received for all grades was:-

1930	\$5.151
1933	4.684
1936	4.538
1939	4.727
1942	5.655
1944	6.762

Variations between the prices to customers for the above years are as follows:-

		<u>High</u>	<u>Low</u>
<u>Run of Mine or Round</u>	1930	\$6.732	\$4.839
	1933	5.961	4.667
	1936	5.863	4.795
	1939	5.943	3.745
	1942	7.009	5.676
	1944	7.926	5.677
<u>Slack</u>	1930	3.888	3.408
	1933	4.024	3.394
	1936	4.131	3.732
	1939	4.556	3.681
	1942	5.396	4.437
	1944	6.393	5.331
<u>Nut</u>	1939	6.612	5.672
	1942	7.431	7.293
	1944	8.376	8.194

BY MR. FRAWLEY: Just what does that mean, variations between the prices to customers?

MR. MORRISON: Well, take run of mine. In 1930 there was a price to customers of \$4.839 and also in that same year a price to customers of \$6.732, the variation in price no doubt caused by conditions and amount of sale.

BY MR. FRAWLEY: Take the year 1930, \$6.732 was the highest price that they got for that coal from customers?

MR. MORRISON: That's right.

BY MR. FRAWLEY: And \$4.839 was the lowest price they got for the same coal from other customers?

MR. MORRISON: That's right, in the same year. (continues Report):

Company Consumption -
Schedules "S" - 20 and "S" - 21

Represent value placed on coal used in company operations, and are included in mining cost.

Sales to Employees - Schedule "S" - 22

This company charge to mining cost, the actual loss on employees' coal, This cost is as follows:-

1930	\$ 9,763.71	1936	\$12,696.00	1940	\$19,476.85
1931	8,513.34	1937	15,940.90	1941	34,736.82
1932	5,525.25	1938	17,318.95	1942	38,942.21
1933	8,912.00	1939	18,389.38	1943	52,997.73
1934	8,178.72			1944	66,464.96
1935	13,103.50		<u>64,345.23</u>		<u>212,618.57</u>
	<u>\$53,996.52</u>				

the total cost for fifteen years amounting to \$330,960.32.

Sales Cost - Schedule "S" - 24

Summarizing the above mentioned schedule, the per ton costs are as follows:-

1930	\$.403	1936	\$.560	1940	\$.726
1931	.432	1937	.821	1941	.608
1932	.437	1938	.745	1942	.609
1933	.420	1939	.816	1943	.619
1934	.393			1944	.602
1935	.377				

MINING COSTS

Schedules	"M" - 1 - Dominion - Mining Costs - 1930 - 1935
	"M" - 2 - " - " - 1936 - 1939
	"M" - 3 - " - " - 1940 - 1944
	"M" - 4 - " - Analysis of Labor and Material - 1930 - 1935
	"M" - 5 - " - Analysis of Labor and Material - 1936 - 1939
	"M" - 6 - " - Analysis of Labor and Material - 1940 - 1944
	"M" - 7 - Cumberland-Mining Costs - 1930 - 1935
	"M" - 8 - " " " - 1936 - 1939
	"M" - 9 - " " " - 1940 - 1944
	"M" -10 - " -Analysis of Labor and Material - 1930 - 1935
	"M" -11 - " -Analysis of Labor and Material - 1936 - 1939
	"M" -12 - " -Analysis of Labor and Material - 1940 - 1944
	"M" -13 - Dominion - Summary of Costs, by Collieries 1936, 1939 - 1944
	"M" -14 - Cumberland- Summary of Costs, by Collieries 1936, 1939 - 1944.

Including depreciation at twenty cents per ton and all charges as made by the company, the cost is shown as under:-

Dominion

	<u>Production</u>	<u>Cost</u>		<u>Production</u>	<u>Cost</u>
1930	3,439,614	\$4.082	1936	3,835,766	\$3.488
1931	2,508,072	4.248	1937	4,063,402	3.748
1932	2,027,686	3.946	1938	3,446,705	3.872
1933	2,598,309	3.548	1939	4,016,345	3.821
1934	3,652,027	3.625	Average	<u>3,836,138</u>	<u>\$3.730</u>
1935	3,249,457	3.732			
Average	<u>2,912,511</u>	<u>\$3.856</u>			

Dominion (Continued)

	<u>Production</u>	<u>Cost</u>
1940	4,387,073	3.919
1941	3,865,533	4.569
1942	3,831,649	4.829
1943	3,153,327	5.918
1944	3,000,932	7.455
Average	<u>3,647,700</u>	<u>\$5.176</u>

BY MR. FORSYTH: Pardon me, Mr. Morrison, have you got any comparable figures for companies other than Dominion and its affiliates?

MR. MORRISON: Oh, yes sir. As a matter of fact we gave some of them in the general report early this afternoon.

BY MR. FORSYTH: I didn't notice them, but probably that is my fault.

MR. MORRISON continues Report:

Cumberland

	<u>Production</u>	<u>Cost</u>		<u>Production</u>	<u>Cost</u>
1930	566,496	\$4.510	1936	483,728	\$4.396
1931	477,393	4.385	1937	574,699	4.609
1932	396,290	4.037	1938	464,585	4.615
1933	387,907	4.180	1939	547,484	4.571
1934	484,341	4.082			
1935	452,895	4.388	Average	<u>517,623</u>	<u>\$4.546</u>
Average	<u>400,886</u>	<u>\$4.276</u>	1940	593,786	\$4.563
			1941	656,529	5.156
			1942	654,585	5.453
			1943	565,728	6.032
			1944	531,649	7.889
			Average	<u>600,454</u>	<u>\$5.749</u>

The costs, by collieries for representative years, are as follows:-

Dominion

	<u>Production</u>	<u>Cost</u>	<u>Production</u>	<u>Cost</u>	<u>Production</u>	<u>Cost</u>
	1 9 3 6		1 9 3 9		1 9 4 0	
Colliery 1B	678,432	\$3.191	695,618	\$3.670	752,216	\$3.873
2	748,337	3.395	642,397	3.783	532,302	4.004
4	450,274	2.781	468,846	3.079	512,834	3.148
5	42,400	3.191				
10	268,667	4.204	299,295	4.215	275,936	3.968
11	312,900	3.998	267,444	4.661	271,175	4.573
12	752,240	3.135	757,621	3.577	807,473	3.622
16	386,956	3.849	460,464	4.083	547,608	4.187
18			43,153	4.067	80,610	4.306
20			161,535	3.295	365,468	3.229
24	195,560	3.782	219,972	4.152	241,451	4.315

	<u>Production Cost</u>		<u>Production Cost</u>		<u>Production Cost</u>	
	<u>1 9 4 1</u>		<u>1 9 4 2</u>		<u>1 9 4 3</u>	
Colliery 1B	686,809	\$4.729	669,873	\$4.979	663,333	\$5.337
2	420,765	4.694	342,442	5.294	262,402	6.507
4	456,593	3.575	491,882	3.750	454,825	4.316
10	157,492	4.218	31,227	5.299		
11	245,086	5.088	219,292	5.464	140,811	7.056
12	617,369	4.167	714,237	4.171	381,817	6.739
16	516,887	4.847	538,692	5.234	480,964	6.427
18	200,457	4.286	221,780	4.558	204,328	5.895
20	319,117	4.447	341,183	4.955	306,359	6.418
24	239,073	4.694	227,925	5.073	213,942	5.639
25			33,111	5.831	43,064	7.200
26					1,482	3.856

Production Cost

	<u>1 9 4 4</u>	
Colliery 1B	525,777	\$7.635
2	217,739	8.000
4	406,096	5.681
11	113,269	10.205
12	419,797	7.563
16	520,584	7.307
18	172,520	8.256
20	321,643	7.592
24	204,732	7.151
25	57,922	8.144
26	40,853	7.133

Cumberland

	<u>Production Cost</u>		<u>Production Cost</u>		<u>Production Cost</u>	
	<u>1 9 3 6</u>		<u>1 9 3 9</u>		<u>1 9 4 0</u>	
Colliery 1	52,194	\$5.925	103,242	\$4.494	141,529	\$4.880
2	273,924	3.974	303,202	4.190	317,356	4.113
4	51,299	6.501	141,040	5.431	134,901	5.288
6	106,311	3.717				
	<u>1 9 4 1</u>		<u>1 9 4 2</u>		<u>1 9 4 3</u>	
Colliery 1	196,254	\$5.381	179,002	\$5.634	118,782	\$7.234
2	303,603	4.557	272,677	4.960	240,112	5.445
4	156,672	6.034	202,906	5.954	206,834	6.024
	<u>1 9 4 4</u>					
Colliery 1	117,066	\$9.017				
2	263,961	6.692				
4	150,622	9.109				

In comparing costs with the production, by tons per man, it is of interest to note that as the production goes down, the costs go up in almost the same ratio as is demonstrated by the following tabulation:-

<u>Dominion</u>			<u>Cumberland</u>		
<u>Year</u>	<u>Cost per Ton</u>	<u>Tons per Man</u>	<u>Year</u>	<u>Cost per Ton</u>	<u>Tons per Man</u>
1944	\$7.455	1.52	1944	\$7.889	1.36
1943	5.918	1.68	1943	6.032	1.48
1942	4.829	2.02	1942	5.453	1.60
1941	4.569	2.01	1941	5.156	1.63
1931	4.248	2.18	1938	4.615	1.78
1930	4.082	2.25	1937	4.609	1.72
1932	3.946	2.20	1939	4.571	1.77
1940	3.919	2.37	1940	4.563	1.74
1938	3.872	2.33	1930	4.510	1.70
1939	3.821	2.41	1936	4.396	1.77
1937	3.748	2.33	1935	4.388	1.70
1935	3.732	2.23	1931	4.385	1.80
1934	3.625	2.34	1933	4.180	1.84
1933	3.584	2.36	1934	4.082	1.85
1936	3.488	2.42	1932	4.037	1.89

BY MR. MORRISON -C- -- It is interesting to note that those figures do not run in chronological order. They start from the highest cost per ton, and the records show that 1944 shows the highest cost, and a tons per man output of 1.52. Going down the line 1936 is the lowest cost, and it represents the highest output of tons per man.

MR. MORRISON continues Report

It will also be observed that Dominion, having a higher production per man, the costs are relatively lower.

Charges in Mining Costs which are of a
Capital or Deferred Nature

Attached hereto are schedules showing the details of expenditures made under operating work orders, which have been charged to mining costs. These expenditures appear to be of a capital, or deferred nature and should be subject to further consideration as to distribution. All charges for pit tubs have been eliminated from the attached statements, and are dealt with later in this report.

A summary of these charges by years, is as follows:-

	<u>Collieries</u>	<u>Sydney and Louisburg Railway</u>	<u>Miscel- laneous</u>	<u>Dominion Total</u>	<u>Cumber- land</u>
1932			\$ 13,200	\$ 13,200	
1933	\$ 1,000			1,000	
1934	50,244			50,244	
1935	66,635		12,754	79,389	
1936	27,496		21,404	48,900	
1937	59,679		29,182	88,861	
1938	153,027		21,331	174,358	
1939	116,162		22,003	138,165	
1940	50,913		15,844	66,757	
1941	102,615	\$ 62,768	28,751	194,134	
1942	165,025	54,380	7,910	227,315	\$ 3,626
1943	205,477	18,533	4,865	228,875	7,179
1944	238,059	18,464	6,904	263,427	41,032
	<u>\$1,236,332</u>	<u>\$154,145</u>	<u>\$184,148</u>	<u>\$1,574,625</u>	<u>\$51,837</u>

In addition to the above, the following amounts are charged to Mining Costs - Dominion Coal Company:-

	<u>Fire Loss</u>	<u>Flood</u>	<u>Total</u>
1943	\$271,252	\$23,088	\$294,340
1944	<u>64,333</u>	<u>988</u>	<u>65,321</u>
	<u>\$335,585</u>	<u>\$24,076</u>	<u>\$359,661</u>

Also attached hereto are schedules for the years 1943 and 1944, showing expenditures in excess of \$1,000.00, which have been charged to mining costs.

Under the heading of "Reserves", later on this report, further expenditures of a capital, or deferred nature are discussed.

Mine Cars or Pit Tubs - Dominion Coal Company Limited

For this class of expenditure, the company has charged the following amounts to mining costs:-

1932	\$ 39,128.51
1933	45,682.32
1934	111,441.77
1935	177,616.98
1936	95,840.12
1937	111,685.02
1938	113,710.69
1939	84,232.45
1940	71,224.50
1941	142,508.15
1942	137,892.90
1943	151,277.56
1944	<u>86,048.13</u>
	<u>\$1,368,289.10</u>
Average per Year	<u>\$ 105,253.00</u>

In addition, in 1935 the reserve for renewals and betterments was charged with \$83,504.70, which represents one-half the cost of pit tubs and tipples for Colliery No. 12, the balance being included in the above charges. Also, in 1943 spare pit tubs, costing \$22,702.07, for Colliery No. 25, were charged direct to operations, and tubs for Colliery No. 18 in the amount of \$7,711.67.

Mining Costs - Miscellaneous Items

Corporation General Expense

Using the year 1944 as an example, the Dominion Coal Company has been charged with \$249,353.62 in respect of this class of expense, representing a proportion of the expenses incurred by Dosco, and amounting to \$595,391.70. These expenses are summarized as follows:-

Administration Expenses	\$ 22,373.20
-------------------------	--------------

General Expenses - Telephone and Telegrams	3,360.35
Rental	23,893.32
Travelling Expenses	6,388.29
Sydney Office	9,523.47
Montreal Office	23,432.81
Stationery	12,798.38
Subscriptions	1,249.62
Advertising	12,881.37
Coal Sales Expense	11,913.57
Steel Sales Expense	36,925.97
Special Disbursements	67,721.07
Legal Expense	29,604.84
Trust Company Fees	19,114.24
Donations	40,477.58
Directors' Fees	13,970.00
Audit Expense	52,432.72

Direct Expenses to Scotia Companies -	
Trenton Steel Works	23,556.00
Old Sydney Collieries	29,538.89
Acadia Coal Company	16,060.59
Eastern Car Company	18,175.42

Reserve for Contingencies	120,000.00
---------------------------	------------

\$ 595,391.70

The distribution to companies is tabulated below:-

	<u>Amount</u>	<u>Percentage</u>
Domision Steel and Coal Corporation Ltd.	\$202,162.91	33.954%
James Pender and Company Limited	1,720.81	.289
Peck Rolling Mills Limited	5,960.75	1.001
Security Fence Company Limited	2,219.08	.373
St. Lawrence Wire Company Limited	2,332.72	.392
Halifax Shipyards Limited	18,459.58	3.101
Seaboard Power Corporation Limited	10,706.73	1.798
Trenton Steel Works Limited	11,300.00	1.898
Eastern Car Company Limited	27,200.00	4.568
	<u>\$282,062.58</u>	<u>47.374%</u>
Dominion Coal Company Limited	\$249,353.62	41.881%
Cumberland Railway and Coal Company	32,475.50	5.454
Old Sydney Collieries Limited	23,200.00	3.897
Acadia Coal Company Limited	8,300.00	1.394
	<u>\$313,329.12</u>	<u>52.626%</u>
	<u>\$595,391.70</u>	<u>100%</u>

The basis for the proration is the revenue of the various companies during the year 1930, after taking into consideration specific charges to the companies. After the charges to all associated companies are determined, a redistribution of the expenses chargeable to the Scotia group is made in order to reduce the charges to a fixed annual fee. This redistribution is as follows:-

	<u>Expense Prorated</u>	<u>Fee Charged</u>	<u>Balance Redistributed to Other Companies</u>
Trenton Steel Works	\$40,760.91	\$11,300.00	\$29,460.91
Eastern Car Company	48,095.19	27,200.00	20,895.19
Old Sydney Collieries	43,776.85	23,200.00	20,576.85
Acadia Coal Company	26,976.63	8,300.00	18,676.63
	<u>\$159,609.58</u>	<u>\$70,000.00</u>	<u>\$89,609.58</u>

Of the above amount of \$89,609.58, there is charged to the Dominion Coal Company, 48.8%, or \$43,729.47, and to Cumberland, 8.2%, amounting to \$7,347.99, both of which amounts are included in the total charged to each company.

BY MR. FRAWLEY: Well, the \$249,353.62, that is all that

Dominion Coal pays?

A That is correct, but it includes a portion of the redistribution of the Scotia group.

Q Which arises out of the fact that for some reason or other Trenton Steel Works, Eastern Car. and so forth do not pay

their distributed portion, but what you call a charged fee?

A. That is correct.

Q. And were you given the reason for that?

A. No, we had no reason given to us.

BY MR. FORSYTH: Did you ask for one?

A. I don't know if Mr. Simpson asked for one. I have no doubt if he asked for one he would have got it.

BY MR. FRAWLEY: Did you ask for one, Mr. Simpson?

MR. SIMPSON: No. That was given to me as a fixed fee.

MR. MORRISON continues Report:

The "Corporation General Expenses" included in the mining costs of the Dominion Coal Company for representative years are as follows:-

1936	\$121,123.75
1939	196,466.98
1940	204,296.17
1941	223,010.56
1942	195,064.78
1943	225,411.87
1944	241,382.03

There are also further annual charges for selling expenses, etc., charged to sales costs which, in the year 1944, amounted to \$7,971.59.

MR. MORRISON: Now that is the amount necessary to make up the \$241,382.03 to the \$249,000 odd which is the total charge, and perhaps for clearing the record it should be mentioned that this amount of \$7,971.59 is made up of two figures, \$8,559.26 charged to sales costs and \$587.67 credited to administrative expense, etc., giving the net figure of \$7,941.59. (Continues Report):

PROPORTION OF MONTREAL SALARIES -
Schedules Miscellaneous 12 to 14

Details of the distribution among the various companies, of the above salaries, are shown by these schedules for the years 1936 and 1939 to 1944.

The charges to the coal companies for this period are summarized hereunder:-

<u>Year</u>	<u>Salaries- Officials</u>	<u>Salaries- General</u>	<u>Total</u>
1936	\$133,704	\$ 44,178	\$177,882
1939	188,190	56,237	244,427
1940	190,504	52,241	242,745
1941	199,282	58,127	257,409
1942	179,728	66,053	245,781
1943	173,590	67,318	240,908
1944	191,706	65,508	257,214

BY MR. FRAWLEY: That is apart from the Corporation generally?

MR. MORRISON: Oh yes. It is the Montreal salaries.
(Continues Report):

The percentages charged to coal operations vary from 36.617% to 45.966% of officials' salaries, and from 31.707% to 38.019% for general salaries. The basis of proration is the same as in the case of the corporation expense, viz. the revenue of the companies for the year 1930.

BY MR. FRAWLEY: I thought there was a freezing order on salaries. Those salaries seem to have gone up.

MR. MORRISON: There may be more officials.

BY COMMISSIONER McLURIN: Well, from 1936. The order didn't come in until November 1941.

BY MR. FORSYTH: There looks like a decrease from 1941.

BY MR. FRAWLEY: Yes. I was only looking at from 1943 to 1944.

BY MR. FORSYTH: The freezing order came in in 1941, and salaries are \$8,000 less in 1944 than in 1941.

MR. MORRISON continues Report:
General Staff and Superintendence

For the year 1944, the total cost for salaries under the above heading, and which was charged to mining costs, amounted to \$548,750.72. At the end of the year 1944, there were two hundred and forty employees under this category and, assuming that this figure represented the average for the year, the individual earning would be \$2,285.00.

Colliery Management

The costs for 1944 under this heading totalled \$93,093.31 and, on the basis of thirty employees at the end of 1944, the

average individual earning would be approximately \$3,100.00.

SYDNEY AND LOUISBURG RAILWAY - TARIFF DIFFERENTIAL -
Schedule Miscellaneous 1

The freight rate charged to the Steel Division is less than the tariff rate, resulting in a charge to coal operations

as under:-	1942	\$23,589.19
	1943	62,476.27
	1944	842.23

BY MR. FRAWLEY: The Sydney and Louisburg Railway publishes its tariffs with the Board of Transport Commissioners?

MR. MORRISON: I assume it would send a statement to the Board of Transport Commissioners.

BY MR. FRAWLEY: And that tariff calls for the charging of a certain rate per ton?

MR. MORRISON: The Sydney and Louisburg Railway gets that rate per ton.

BY MR. FRAWLEY: It gets part of it from the people who use the railway as customers, and the balance is made up by Dominion Coal?

MR. MORRISON: Yes.

BY MR. FRAWLEY: And did you come across any reports -- the report to the Board of Transport Commissioners simply shows that they charged and collected full tariff rates, as they must under the law?

MR. MORRISON: Well, I don't know what the reports would show, but there would be no need to show anything else, because the railway company gets that tariff. The fact that two parties pay for it would not make any difference. (Continues Report):

SALES OF PURCHASED COAL

American Coal - Schedule Miscellaneous 7

The sales of American coal for the years 1939 to 1944 are as follows:

<u>Year</u>	<u>Tonnage</u>	<u>Sales Value</u>	<u>Profit or Loss</u>
1939	85,641	\$ 541,201	\$-105,019
1940	188,806	1,265,432	19,200
1941	712,933	4,920,250	28,472
1942	1,321,651	9,963,411	178,436
1943	1,741,049	15,178,445	408,497
1944	1,753,693	15,960,274	438,731

The above profits are before charging any amount for administration or other overhead.

Schedules Miscellaneous 8 and 9 show the details of the transactions for all other purchased coal.

RESERVES

Comments on the six reserves open as at 31st December, 1944 are given below. There were an additional seven reserves in the company's books in 1930 and later years, but were all cleared prior to 1939.

Reserves for Subsidence Claims Schedule "R" - 1

The above reserve has been set up to provide the company against loss arising through subsidence due to the company's underground operations.

A summary of this reserve is undernoted:-

Balance, 1st January, 1930		\$123,891.42
Provision from Profits - 1930-1944	\$831,282.32	
<u>Deduct Expenditures</u> - Do.	<u>238,380.59</u>	592,901.73
Balance, 31st December, 1944		<u>\$716,793.15</u>

Provision is made annually, by charges to mining costs, on a per ton basis; which reached a figure of three cents per ton. The details of the provision are shown on Schedules "M"-1 to "M"-3. It should be noted that the reserve ~~was~~ increased from 1st January, 1930 by \$592,901.73.

Reserve for Contingencies - Schedule "R" - 1

Balance, 1st January, 1930 \$457,546.88

Transfer from:-

Tug Repairs Reserve \$25,143.78

Insurance on Barges Reserve 90,440.87

Loss on Cargoes Reserve 102,626.89

\$218,211.54

Provision

19,906.20

238,117.74

Deduct Expenditures

\$695,664.62

484,881.89

Balance, 31st December, 1944

\$210,782.73

DOMINION COAL COMPANY LIMITED

Statement Showing Details of Charges to Contingent
Reserve for Undernoted Years

<u>Year</u>	<u>Particulars</u>	<u>Amount</u>
1930	Allowance of \$1.80 per ton on 29,328 tons of coal delivered to Anglo, Newfoundland Development Company during year 1929	\$52,790.42
	Legal services in connection with reparations claims paid to I. E. Weldon, K.C.	3,190.00
	Special disbursements paid at Montreal Province of Quebec Corporation Tax - June 30, 1921, to June 30, 1930	34,552.00
		<u>4,511.10</u>
1931	Rebates due from Montreal Harbours Commissioner for wharfage, etc. for year 1929 and held in dispute by them on account of rebate for years 1927 and 1928	\$95,043.52
1932	Adjustment in price of power supplied Canadian Marconi Company	45,251.79
	Special disbursements paid at Montreal	762.78
		<u>3,250.00</u>
1933	Special disbursements paid at Montreal	4,012.78
	" " - McNeil & Morrison Solicitors	6,220.00
		<u>4,370.00</u>
1935	Special disbursements paid at Montreal	10,590.00
	Services as president paid Estate of C. B. McNaught	40,387.51
		<u>13,000.00</u>
1936	Federal Income Tax Adjustment Year 1934	53,387.51
		69,753.63
1937	Expenses New Bond Issue	66,351.43
	Premium on First Mortgage Bonds Outstanding & Redeemed October 1st, 1937	66,358.35
		<u>132,709.78</u>
1939	Province of Quebec Capital Tax Years 1922 to 1939	73,681.62
1941	Adjustment in Price of Coal supplied Montral Coke & Manufacturing Company, Year 1940	451.26
		<u>\$ 484,881.89</u>

Reserve re Preferred Stock - Schedule "R" - 1

This reserve arises through the company buying in and cancelling its preferred shares at a price less than par.

	Preferred Stock Redeemed	Cost	Discount Credited to Reserve	Average Cost per \$100.00 of Par
1938	\$161,975.00	\$122,709.60	\$ 39,265.40	\$75.75
1939	179,300.00	136,380.39	42,919.61	76.05
1940	151,500.00	127,909.00	23,591.00	84.40
1941	10,875.00	7,867.00	3,008.00	72.35
1942	49,875.00	24,817.95	25,057.05	49.75
1944	86,500.00	47,802.49	38,697.51	55.25
	<u>\$640,025.00</u>	<u>\$467,486.43</u>	<u>\$172,538.57</u>	<u>\$73.00</u>

Reserve - Sundry Operating - Schedule "R" - 1

Summary of the above reserve is:-

Balance forward, 1st January, 1930	\$ 74,641.99
Provision	\$397,969.29
Less Expenditures	<u>326,192.15</u>
Balance, 31st December, 1944	<u>\$146,419.13</u>

Reserve - Workmen's Compensation Board -
Schedule "R" - 1

Analysis of this reserve is:-

Provision - 1940-1944	\$183,642.31
Less Expenditures	<u>163,669.12</u>
Balance 31st December 1944	<u>\$ 19,973.19</u>

Reserve for Betterments and Extensions -
Schedule "R" - 2

(Dominion and Cumberland Companies)

A summary of the above reserve is as follows:

Balance Forward, 1st January, 1932	\$ 703,747.83.
Provision, on a tonnage basis, Schedules "M"-1 to "M"-3	
- Dominion	\$7,643,038.00...
- Cumberland	<u>901,131.40</u>
	\$8,544,169.40
Expenditure - Dominion	\$5,787,242.85
Cumberland	<u>745,215.02</u>
	6,532,457.87
	\$ 2,011,711.53
Deduct	
Transfer to Income Tax Reserve	<u>400,000.00</u>
	1,611,711.53
Balance 31st December, 1944	<u>\$2,315,459.16</u>

Details for the years 1930 and 1931 are not readily available.

Attached hereto are schedules showing the details of the charges to this reserve from 1932 to 1944. From the above summary it will be seen that the reserve has increased from \$703,747.63 at 1st January, 1932, to the sum of \$2,315,459.16 at 31st December, 1944, or an increase of \$1,611,711.53. As all of the provision for this reserve has been charged to mining costs, such costs have been increased beyond actual expenditures by the amount of such increase. The increase is made up in the following years:-

<u>Year</u>	<u>Increase</u>	<u>Decrease</u>
1932	\$ 191,355	
1933	667,639	
1934	773,678	
1935		\$354,069
1936		80,499
1937		487,502
1938		340,556
1939	538,279	
1940	410,729	
1941	147,318	
1942	145,339	
1943	--	--
1944	--	--
	<u>\$2,874,337</u>	<u>\$1,262,626</u>

Expenditure of a Capital or Deferred Nature

An analysis of the charges to the reserve for betterments and extensions is attached hereto, and it would appear that there are a number of items of a capital, or deferrable nature, which have been charged to operations. These are summarized as follows:-

<u>Year</u>	<u>Dominion Company</u> (Cape Breton Operations)	<u>Cumberland Company</u> (Springhill) Operations)
1932	\$ 29,350.28	\$ 2,949.90
1933	44,836.17	92,392.43
1934	492,676.09	110,138.26
1935	495,317.94	80,338.18
1936	600,109.65	30,210.28
1937	492,387.03	52,063.50
1938	400,040.59	60,786.03
1939	23,025.14	1,893.35
1940	329,155.69	32,760.31
1941	277,014.94	126,446.90
1942	236,689.27	23,105.03
1943	165,100.89	10,177.47
1944	287,829.53	45,782.84
	<u>\$ 3,873,533.21</u>	<u>\$ 669,044.48</u>

Other Reserves -

Provision for Railroad Freight - \$100,000.00

In 1939, the above amount was charged to operations in anticipation of the Company (Dominion) having to make shipments by rail, instead of by water, to the St. Lawrence market. This condition did not materialize, and the reserve is still carried intact.

LABOR EARNINGS, ETC.

Schedule "E" - 1 - Miners' Earnings - 1931-1936-1939 to 1940.

"E" - 2 - Shifts Worked - Dominion

"E"-2(A)- Do. - Cumberland.

"E" - 3 - Pension Costs

"E" - 4 - Statement of Production, in tons per man.

Schedule "E" - 1

A summary of the daily rates and annual earnings for the undernoted periods is as follows:-

	<u>Datal</u>		<u>Local Contract</u>		<u>Mining Contract</u>		<u>Total All Classes</u>	
	<u>Daily</u>	<u>Annual</u>	<u>Daily</u>	<u>Annual</u>	<u>Daily</u>	<u>Annual</u>	<u>Daily</u>	<u>Annual</u>
1931	\$3.98	\$ 685.96	\$6.98	\$ 950.32	\$7.40	\$ 934.63	\$5.20	\$ 795.79
1936	3.78	882.98	6.68	1,375.83	6.66	1352.48	4.87	1076.57
1939	4.18	1,019.85	7.36	1,503.30	7.52	1585.91	5.31	1227.80
1940	4.25	1,138.76	7.58	1,725.31	7.60	1795.47	5.38	1388.36
1941	4.67	1,318.57	7.72	1,982.10	7.64	1966.03	5.44	1518.70
1942	4.97	1,407.56	8.89	2,190.23	8.42	2078.08	5.92	1612.39
1943	5.30	1,587.01	9.16	2,282.50	9.04	2312.57	6.15	1769.64
1944	6.19	1,822.40	10.02	2,444.51	9.83	2608.15	6.98	2001.06

Schedule "E" - 2

The peaks of shifts worked are tabulated as under:-

	<u>Dominion</u>		<u>Cumberland</u>	
	<u>Number of Shifts</u>	<u>Year</u>	<u>Number of Shifts</u>	<u>Year</u>
Surface - High	302,237	1944	63,509	1930
- Low	152,710	1932	39,420	1938
Underground - High	1,116,275	1944	226,841	1930
- Low	466,771	1932	76,101	1932
Mining - High	644,452	1940	146,222	1937
- Low	300,919	1932	91,917	1933
Total - High	1,984,868	1944	409,817	1942
- Low	920,400	1932	210,356	1932

Schedule "E" - 4

This schedule shows the tons per man produced. The high and low production is as under:-

	<u>Dominion</u>		<u>Cumberland</u>	
	<u>Tons</u>	<u>Year</u>	<u>Tons</u>	<u>Year</u>
Surface Labor - High	17.34	1939	11.79	1938
- Low	9.93	1944	8.81	1944
Underground Labor - High	4.82	1936	5.30	1933
- Low	2.69	1944	2.34	1944
Mining Labor - High	6.81	1940	5.2	1930
- Low	5.35	1944	3.93	1937
Total Labor - High	2.42	1936	1.89	1932
- Low	1.52	1944	1.36	1944

Percentage of Labor to Total Mining Costs

<u>Dominion</u>		<u>Cumberland</u>	
1930	56.86%	1930	59.51%
1931	56.19	1931	55.99
1932	54.36	1932	53.06
1933	54.30	1933	50.26
1934	54.54	1934	52.13
1935	57.34	1935	55.38
1936	57.68	1936	56.16
1937	59.92	1937	59.01
1938	59.09	1938	58.53
1939	58.73	1939	58.59
1940	58.82	1940	60.46
1941	59.27	1941	61.04
1942	61.48	1942	63.87
1943	60.56	1943	63.54
1944	62.24	1944	64.35

Comparison of Annual Output
with Man-Shifts 1930 - 1944 (000 omitted)

Cape Breton Operation

Year	Tons Output	M a n - S h i f t s				Tons Per Man	Labor Costs Per Ton
		Surface	Underground	Mining	Total		
1930	3439	228	758	542	1,528	2.25	\$ 2,321
1931	2508	185	593	373	1,151	2.18	2,387
1932	2027	152	467	301	920	2.20	2,145
1933	2598	166	542	391	1,099	2.36	1.946
1934	3652	223	783	557	1,563	2.34	1.977
1935	3249	209	748	497	1,454	2.23	2.140
1936	3835	223	796	566	1,585	2.42	2.012
1937	4063	244	882	621	1,747	2.33	2.246
1938	3446	208	738	524	1,470	2.33	2.288
1939	4016	231	841	595	1,667	2.41	2.244
1940	4387	257	947	644	1,848	2.37	2.305
1941	3865	286	1,028	612	1,926	2.01	2.708
1942	3831	281	1,002	614	1,897	2.02	2.969
1943	3153	293	1,053	529	1,875	1.68	3.578
1944	3000	302	1,116	566	1,984	1.52	4.640

- - - - -

From the above summary, it will be seen that the number of man-shifts for mining labor for the years 1936 to 1944 were approximately the same, viz. 566,000 man-shifts.

4:30 HEARING ADJOURNED UNTIL Sept. 19, 1945, at 10:00 A.M.

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ROYAL COMMISSION ON COAL

SYDNEY, N. S.

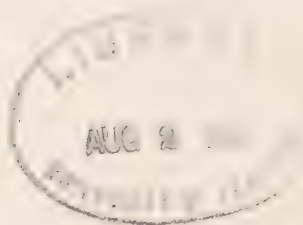
September 19, 1945

Volume XLIV

WITNESS

Page

K. J. Morrison 3994 - 4132



ROYAL COMMISSION ON COAL

Sydney, N. S.,
September 19, 1945.

The Royal Commission on Coal convened at the Court House, Sydney, N. S., on Wednesday, September 19th, 1945, at 10:00 o'clock A.M.

PRESENT

Hon. Mr. Justice W. F. Carroll, Chairman
 Hon. Mr. Justice G. C. McLaurin, Commissioner
 Angus Morrison, Esquire, Commissioner
 J. J. Frawley, K.C., Commission Counsel
 J. L. Dubinsky, Assistant Counsel
 Robert D. Howland, Secretary
 L. A. Forsythe, K.C., representing Dominion Steel & Coal Corporation, Ltd.
 J. L. Cohen, K.C., representing United Mine Workers of America, District 26.

MR. K. J. MORRISON resumes the stand, and continues reading Exhibit 205

Cape Breton Operation

The operations for the years 1936 and 1944 are summarized as under:

	<u>1936</u>	<u>1944</u>	<u>Increase or Decreases</u>
Production - tons	3,835,000	3,000,000	-835,000
<u>Man-Shifts</u>			
Surface Labor	223,000	302,000	79,000
Underground labor	796,000	1,116,000	320,000
Mining labor	566,000	566,000	
Total Man-Shifts	1,585,000	1,984,000	399,000
			<u>Increase Loss</u>
Operating Results	<u>\$ 586,889.70</u>	<u>\$ -4,875,975.03</u>	<u>\$5,462,664.73</u>

BY MR. MORRISON - This excludes the loss of the Sydney and Louisburg Railway, eighty-six thousand odd, which we think should be included. We addressed a letter of inquiry to the

Company through Mr. Frawley in this connection, and have a reply dated September 10th, 1945, which it might be appropriate to read into the record at this time.

BY MR. FRAWLEY - There are four pages to Mr. McColl's reply, and I think it should go on the record, so I will read it:

September 10, 1945.

J. J. Frawley, Esq.,
Counsel, The Royal Commission on Coal,
At Sydney, N. S.

Dear Mr. Frawley:

The question has been asked why in the year 1944 did it take more shifts to produce less coal than in 1936. I trust the following information will be of assistance in grasping the fundamental causes; with respect to the Cape Breton Collieries of the Dominion Coal Company, Limited -
Coal

In the year 1936, /in common with other industries, was emerging from one of the world's worst trade depressions, during which time every retrenchment possible had to be made to the point of cutting down on essentials.

Labour in general throughout the Nova Scotia coal operations, came out of the depression in debt, and as industry recovered men were willing and anxious to work to extricate themselves from that position. Furthermore, those who had employment did their utmost to hold on to it, for the reason that there was not enough work to go around.

In contradistinction, the year 1944 followed five years of full time employment available to all whilst in the same period there has been a shortage of labour. Concurrent with this, wages have reached the highest rates ever paid in the Nova Scotia coal industry.

These conditions have bred a sense of security, one result of which is that men now feel they do not have to work so hard as they did formerly to retain their jobs and it is also most noticeable that men will leave their work on the slightest of pretexts.

The Executive of the Labour Unions have informed the Management that men are now not going to work as hard as they did in the past. This is exemplified by the fact that our men have never returned to the same standard of work efficiency since they deliberately slackened their efforts in the slow-down strike of 1941.

Nowadays whenever men are sent to do a job it is necessary to provide constant supervision if the desired results are to be obtained and it is largely on this score that the supervisory force shows an increase.

During the war years there has been a shortage of consumer's goods and consequent lack of opportunity for the miner to spend all the money that could be earned.

Accompanying this was the imposition of income tax which the coal miners at heart regarded with resentment.

All this has reacted on the miner so that he does not now feel the need of full employment with the result that he will work only when he feels like doing so.

Absenteeism has consequently reached an all-time high, and it is significant to note that in general the higher the man is paid the greater is his rate of absenteeism.

Absenteeism, particularly a high rate of absenteeism, is bad enough by itself, but superimposed upon top of a labour shortage it is little short of disastrous. This latter condition has compelled the Company, particularly in longwall operations, and with the object of getting the greatest possible production, to induce the men to fill in for absentees by working overtime, this being done by meeting the men's demands that they be paid for more hours than they actually work. Thus the number of shifts recorded are not a true index of the amount of time actually worked.

With such a number of men remaining away from work the producing sections of a mine are never completely manned. Nevertheless, the same number of haulage hands are required to serve the section and the same number of repair men, etc., are

necessary whether the section is producing at full or only part rate.

Another phase of the present situation is that a great many of our most skilled men joined the armed services and were thus lost to the industry before the Freezing Order with respect to coal miners became effective.

Replacements for datal workers had to be recruited from untrained men and boys with the result that it takes more men for certain jobs than would be necessary if suitably skilled men were available. In this connection one must not overlook the effect of the National Selective Service Regulations which required the Company to give employment to any man reporting for work and the additional fact that such men as were directed by the Selective Service to our mines were neither trained in coal mining nor of the best type of workmen. Labour turn-over for the war years has totalled 79.4 percent.

The high rates now being paid to datal workers had led to their refusing to leave their present jobs and go to the coal face.. Because of this shortage of producers as a whole (as distinct from absenteeism) management has been forced to shut down production in some sections of the mines.

Our mines have been laid out for certain definite daily tonnages and men have to be constantly employed in repairing and keeping open the arterial roadways to keep the mines in a safe condition. Such work has to be carried on no matter what tonnage may be produced, and even if the section is not producing, so that it is impossible under such conditions to maintain the same ratio between producers and other men employed in the mine when a shortage of producers obtains either of a semi-permanent nature or through absenteeism.

Conditions in mines are not permanent but change from time to time, more particularly so in our submarine mines where there are distinct periods in the life of a mine. In the nine years elapsed between the periods being compared distinct changes have occurred in some of our mines which make exact comparison impossible.

For example, in No. 1-B Colliery, easily-won coal from room work made up 65 percent of the 1936 output of that mine. By the year 1944 this easily-won coal was practically worked out and the percentage of coal from rooms had fallen to 16.6 percent. This shortage of room coal had to be replaced by coal obtained by the longwall system under much more arduous conditions; this percentage had increased from 14.4 percent in 1936 to 64.3 percent in 1944.

In No. 2 Mine coal obtained from drawing pillars, which involves more fatal work than rooms, has increased from 12.5 percent in 1936 to 80.5 percent in 1944.

In No. 4 Mine there was no pillar coal in 1936, the bulk of the output at that time being obtained from some very easily-won coal near the shore line. In 1944 some 44½ percent of the output was obtained from pillar coal mined at a much heavier cover and at a distance of over two miles seaward from the shore line.

These cases are cited to show changes that have occurred in this period, which actually has been a period of transition for the mines. From now on conditions in these mines should remain fairly constant for quite a long time to come.

One of the changed conditions that can be actually gauged is the travel time of men to and from work, which has in the nine years interval increased by 32 minutes on the average, despite additional transportation facilities for riding men to their work, accounting for 44 additional shifts per day for enginemen and tripriders. This increased length of travel time means that with the same rate of exertion in each case, 9 percent more men are now required to complete a specified job in the working shift on account of the shorter work period.

In the past the Company has been able to meet the adverse changes in one direction by compensating changes elsewhere and unquestionably will be able to do so again, given the co-operation of its labour force.

In 1936 no attempt was made to operate the mines on Saturday, that day being reserved for maintenance and repairs to condition the mines for the following week.

Since the beginning of the war the mines have worked on Saturday mornings with the sole object of producing all coal possible. At first the turn-out to work on Saturday was pretty good but with the passage of time work attendance on Saturday mornings and also on Friday nights, has fallen away to such an extent that for the past two years this attempt has been a burden to the Company, who have sought, but so far without success, to give up attempting to work on Saturdays.

This Saturday morning work, in addition to being highly unremunerative in all senses, also compels the Company to do all they can to induce men to come to work on Sundays to get the essential maintenance and repair work done. Sunday work is as costly as it is unpleasant and men just do not want to work on that day.

Should you desire further information in this respect, I shall be pleased to supply it.

Yours very truly,

(Sgd) T. L. McCall
General Manager.

BY MR. FORSYTHE - I would like to add something. There is another important factor in this matter of the increase of the number of man-shifts, and that is in 1936 the mines only worked 205 days, and in 1944 they worked 269 days, and if you take the labour force of 14,784 and the extra days, it will give you 367,000 shifts without anything else.

BY MR. FRAWLEY - It is only fair to have this explanation, because Mr. Morrison simply puts down the bald results as shown by the record.

MR. MORRISON continues ReportComparison of Annual Output
with Man-Shifts 1930 - 1944 (000 omitted)Cumberland (Springhill Operations)

Year	Tons Output	<u>M a n - S h i f t s</u>			Total	Tons Per Man	Labor Costs per ton
		Surface	Underground	Mining			
1930	566	64	169	108	341	1.7	
1931	477	53	101	112	266	1.8	\$2.684
1932	396	42	76	92	210	1.89	2.455
1933	387	42	77	92	211	1.84	2.142
1934	484	47	97	118	262	1.85	2.101
1935	452	49	103	115	267	1.70	2.128
1936	483	47	110	117	274	1.77	2.430
1937	574	51	136	146	333	1.72	2.469
1938	464	39	112	110	261	1.78	2.720
1939	547	47	141	121	309	1.77	2.701
1940	593	52	159	131	342	1.77	2.678
1941	656	57	218	131	342	1.74	2.759
1942	654	59	223	128	403	1.63	3.147
1943	565	58	214	110	410	1.60	3.483
1944	531	60	226	104	382	1.48	3.883
					390	1.36	5.077

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Comparing the operations for the year 1939 and 1944,
the following results are ascertained:-

	<u>1939</u>	<u>1944</u>	<u>Increase or Decrease</u>
Production - tons	547,000	531,000	-16,000
<u>Man-Shifts</u>			
Surface Labor	47,000	60,000	13,000
Underground labor	141,000	226,000	85,000
Mining Labor	121,000	104,000	-17,000
Total Man-Shifts	309,000	390,000	81,000
Operating Result	<u>\$6,278.55</u>	<u>-\$861,419.07</u>	<u>\$855,140.52</u>

Coal Inventories and Reserve

Stocks of coal are valued for inventory purposes at
fixed amount, which practice has been in use for several years.

Y MR. MORRISON - I might add there that there is a change in that
procedure in recent years, as purchased coal is inventoried at the
cost price.

R. MORRISON continued Report.

A summary of the inventory value, cost and average
selling price at various points is as under-noted for the years 1943
and 1944.

	<u>1 9 4 3</u>			<u>1 9 4 4</u>		
	<u>Inventory</u> <u>Value</u>	<u>Cost</u>	<u>Average</u> <u>Selling</u> <u>Price</u>	<u>Inventory</u> <u>Value</u>	<u>Laid-</u> <u>down</u> <u>Cost</u>	<u>Average</u> <u>Selling</u> <u>Price</u>
Montreal	\$ 4.830	\$ 7.637	\$ 7.999	\$ 4.830	\$10,099	\$ 8.194
Three Rivers	4.800	8.221	7.969	4.800	9.952	8.455
St. John	5.000	9.772	7.761	5.000	10.541	8.944
Halifax	5.000	9.130	8.090	5.000	10.204	8.662
Point du Chene	5.000	9.461	7.700	5.000	8.805	9.111
Sydney Yard	4.750	6.564	6.353	4.750	7.876	7.221
Mines	3.962	5.896	-	3.970	7.383	-
In transit	9.285	-	-	11.803	-	-
Purchased	8.359	8.359	8.718(US)	8.512	8.512	9.101
Quebec				4.740	11.718	8.791

By using the fixed value method, any individual year is charged or credited with the cost of the variation of coal represented by the change in inventory during that year. Other than purchased coal and in-transit coal, the tonnage variation in inventory is as follows:-

1943 - - 42,310 tons decrease -

1944 - - 53,485 tons decrease -

A reserve against inventories is also carried, which, at the end of 1944, amounted to \$600,194.79. An analysis of this reserve for the years 1939 to 1944 is as follows:-

	<u>Balance</u>	<u>Net</u> <u>Overruns</u>	<u>Provision</u> <u>charged to</u> <u>Agencies</u>	<u>Dept.</u> <u>Suspense</u> <u>Adjustment</u>	<u>Balance</u>
1939 Balance forward	\$289,514.64				
1940 Transactions		67,263.75	42,692.72	-10,410.20	
1941 "		9,025.25	37,226.72	-181.60	
1942 "		161,100.00	24,086.51	-12,663.80	
1943 "				2,391.80	
1944 "				-9,851.00	600,194.79
	<u>\$289,514.64</u>	<u>\$237,389.00</u>	<u>\$104,005.95</u>	<u>-30,714.80</u>	<u>600,194.79</u>

For the years 1943 and 1944 the overruns are taken up in the inventory adjustment in the profit and loss statement. Prior to this date, these adjustments were credited to the Reserve.

As will be noted from the reconciliation of the income tax returns (Schedule Misc. 15), the increase or decrease in this reserve has been added back for taxing purposes, the amounts being as follows:-

1936	-	\$ 182,724.42
1927	-	87,992.88
1938	-	-28,268.03
1939	-	29,277.03
1940	-	99,546.27
1941	-	46,070.37
1942	-	172,522.71

The depreciation suspense adjustment represents the difference between production and sales at the rate of 20 cents per ton. The part of this reserve at the end of 1944 relating to depreciation amounts to \$6,043.40, which is 20 cents per ton on the inventory of coal on hand at the mines of 30,217 tons, as shown by the Balance Sheet Schedule No. 2.

In view of the method of valuing the coal inventories on a fixed basis, which is less than cost or selling price -

BY MR. MORRISON - And again I would have to make that same observation as regards purchased coal which is on a cost basis.

MR. MORRISON continues Report

..the necessity of this inventory reserve amounting to \$600,194.79 is questioned.

Income Tax - Schedule Misc. 15

The above mentioned schedule shows the reconciliation between the consolidated profits as shown by the Companies' statements with the income tax returns up to and including 1942. For the years 1943 and 1944 only tentative returns have been filed because of the non settlement of the claim made to the Emergency Coal Production Board. Assessments have been made by the taxing authorities up to and including the year 1941.

The main items of adjustment between the taxable income as shown by the return of the Company, and the taxable income as ascertained by the Income Tax Department, are the increases or decreases in the various operating reserves and the claim for depletion made by the Company. These amounts are not considered by the Department as affecting taxable income.

BY MR. FORSYTHE - What about depletion, is that so?

BY MR. MORRISON - There is something wrong there. That claim for depletion is wrong because the Income Tax Department do allow a depletion.

BY MR. FRAWLEY - You will make a further comment on page 39?

A. Yes.

BY MR. MORRISON - The following statements in this Report are items of a capital nature included in operations which have been referred to in this report, and which are to be the subject of further consideration by the Engineers and ourselves for the purpose of spreading them over a period of years.

BY MR. FRAWLEY - That goes through the whole of these additional sheets?

A. That is right.

BY MR. FRAWLEY - I suppose that all of the examination can be reserved until Mr. Morrison has finished putting in all of his explanatory reports.

BY MR. FORSYTHE - I don't understand about those items that are suggested to be capital, is it only proposed to go back to 1933 with the engineers?

A. In Dominion to 1932 I think. That is as far as we have the records available.

A. I have 1933 here. All I want to know is how far back you propose to go with your engineers?

A. For that same period Mr. Forsythe you will recall that in my exhibit No. 204..

A. I recall your statement made there.

BY MR. FRAWLEY - Page 9, Costs for 1942, 1943 and 1944 would be the only years that would correctly reflect the proper costs

on this basis.

BY MR. FORSYTHE - All I am asking is how far Mr. Morrison proposes to go back. He stated that he was going to seek engineering advice to determine which of these items should be capitalized and which were properly chargeable to expenditure, with a view of spreading them over a number of years. I want to know if he is only going back to 1933, because I think it makes a difference.

BY MR. MORRISON - Of course Mr. Chairman it makes a difference in this way, that the years from 1933 onward will have received the benefit of expenditures made prior to 1933, and in order to get a settlement of this account to an absolute uniform basis one would have to go back to the beginning of the operation. And we have suggested that for the purpose of the Commission it would be sufficient to go back to the period of 1932. If it is desired to go back further we can do so.

BY MR. FORSYTHE - I am not suggesting it is desired to go back further. The only thing I am suggesting is the futility (if I may use the word) of starting to introduce a new system at 1933 with regard to accounting of this kind, because you cannot get a proper perspective of it unless you start at the beginning. And to deal with the expenditures made for this purpose between 1933 and 1944 does not present an accurate and proper picture, because you have to charge those years at least with the proportion they ought to pay of similar expenses in the previous years, and that raises the important question as to whether you should change the system at all, when it is apparent on the record that the system that has been followed is one of three at least that are mentioned by Mr. Morrison, which have received approval from the Cost Accountants. If Mr. Morrison prefers his system, and I have no quarrel with him on that, but if he is going to prefer it and apply it to this Company, I feel that he must apply it from the beginning if he is going to present a proper and fair picture.

BY COMMISSIONER McLURIN - Is that not something you have to develop?

BY MR. FORSYTHE - I merely asked the question of how far he was going back.

BY MR. MORRISON - Of course Mr. Chairman, that was precisely the reason of our comment in the main report that we have drawn to the attention of the Commission that under that system the only accounts that could be recorded as showing the true position under that system will be the accounts for 1942, 1943 and 1944. That is suggesting a 10 year basis to spread those amounts.

BY COMMISSIONER McLURIN - I think this is something that will have to be developed to a much greater extent in the course of examination, and I think you might go on reading your reports, Mr. Morrison.

BY MR. FRAWLEY - I have some observations to make too, but I think we should wait until we have all the reports. We are, however, appreciative of what you say Mr. Forsythe, and we have thought a great deal about it.

DOMINION COAL COMPANY LIMITED

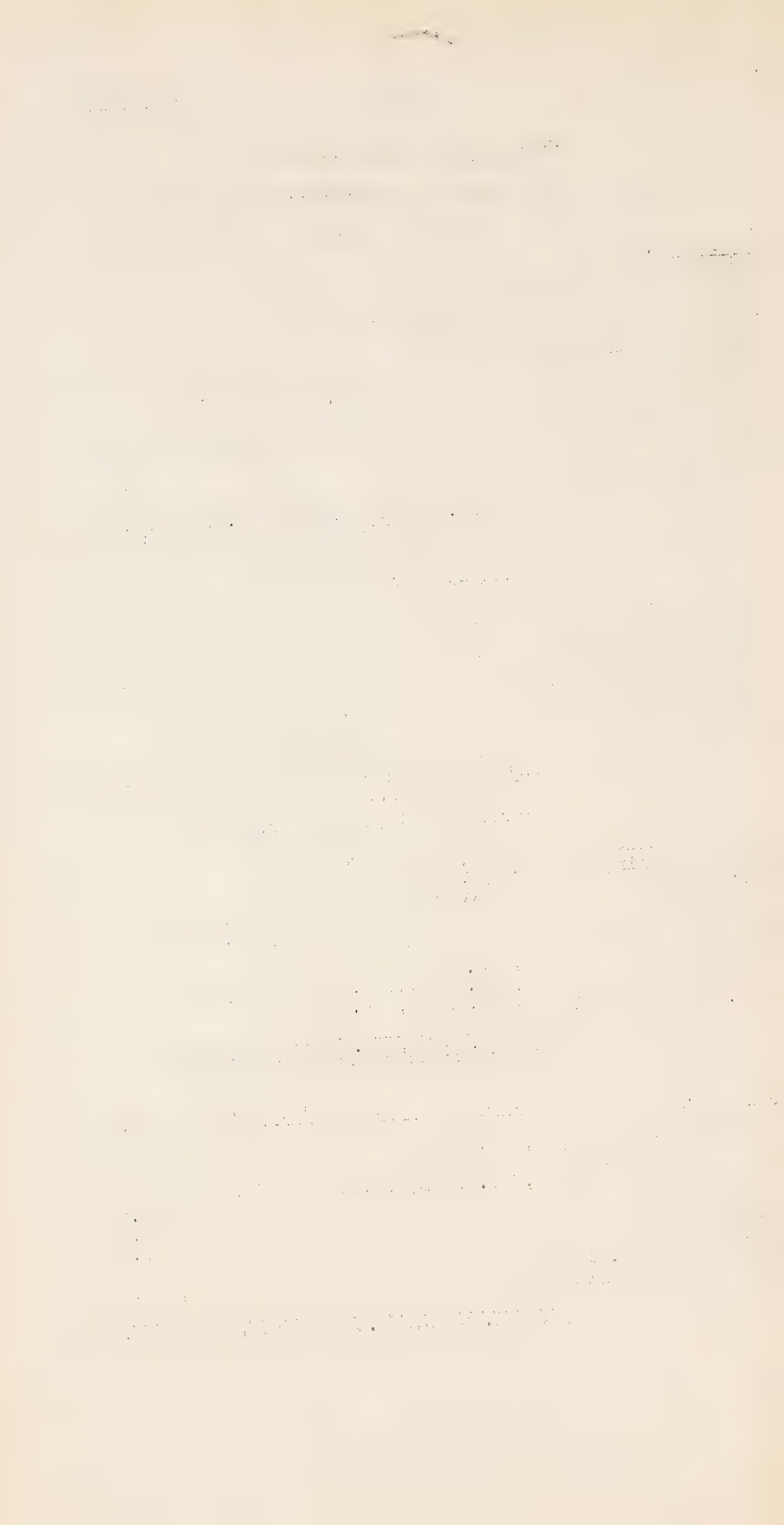
ITEMS OF A CAPITAL NATURE INCLUDED IN OPERATIONS

	<u>1 9 3 4</u>	<u>1 9 3 5</u>	<u>1 9 3 6</u>	<u>1 9 3 7</u>
COLLIERY NO. 1B				
Making and Installing Magnet	\$ 510.64			
Tugger Hoists	7,880.47	\$12,656.01		
Air Main Extension	10,000.00			
Construction of Rake Road		8,441.32	6,062.41	1,205.35
Stone Conveyor		4,341.51		
Reconstructing Main Intake Airways			3,302.68	672.07
Pit Stone Conveyor House and Belt				621.14
	<u>\$18,391.11</u>	<u>\$25,438.84</u>	<u>\$9,365.09</u>	<u>\$2,498.56</u>

	<u>1 9 3 8</u>	<u>1 9 3 9</u>	<u>1 9 4 0</u>	<u>1 9 4 1</u>
Tugger Hoists	\$6,681.20			
Conveyor Troughing				\$ 4,402.50
Pit Stone Conveyor House and Belt				3,570.00
Slow Banking Device - Man and Coal Hoist		\$ 6,349.12		
		503.81		
	<u>\$6,681.20</u>	<u>\$ 6,852.93</u>		<u>\$ 7,972.50</u>

	<u>1 9 4 2</u>	<u>1 9 4 3</u>	<u>1 9 4 4</u>
Air Main Extension	\$ 1,353.13	\$ 581.27	
Conveyor Troughing	4,742.08		
10" Air Main	2,704.00		
12" Air Main			\$13,991.44
Back Pit Tunnel			4,443.04
1,000 K.V. Transformer	5,620.00		
Invested Troughing	8,960.00	17,955.84	21.26
150 H.P. Haulage Engine	4,633.62	9,839.30	
	<u>\$28,012.83</u>	<u>\$28,386.51</u>	<u>\$18,455.74</u>

	<u>1 9 3 5</u>	<u>1 9 3 6</u>	<u>1 9 3 7</u>	<u>1 9 3 8</u>
COLLIERY NO. 2				
New Crusher Plant	\$ 2,347.19			
Construct Main South Intake	2,314.39	\$ 2,298.56	\$ 157.44	
Fan Drive				\$8,281.72
Auxiliary Fan				5,585.41
Build Powder Magazine				659.05
Pipe Line from No. 2 to Central Power Plant				2,034.30
	<u>\$ 4,661.58</u>	<u>\$ 2,298.56</u>	<u>\$ 157.44</u>	<u>\$16,560.48</u>



COLLIERY No. 2 (Continued)

	<u>1 9 3 9</u>	<u>1 9 4 3</u>	<u>1 9 4 4</u>
Pipe Line from No. 2 to Central Power Plant	\$ 66.33		
Hot Water Tank at Wash House	1,704.30		
Drum for Coal Hoist Fan		\$ 7,698.94 7,506.24	\$ 26,243.53
	<u>\$ 1,770.63</u>	<u>\$ 15,205.18</u>	<u>\$ 26,243.53</u>

COLLIERY NO. 4

	<u>1 9 3 4</u>	<u>1 9 3 5</u>	<u>1 9 3 6</u>	<u>1 9 3 7</u>
Rand Engine #17				
East Level	\$ 2,107.71			
Booster Fan		\$ 3,479.17		
2 Tuggers			\$ 1,500.00	
1 Lathe				\$ 1,473.65
	<u>\$ 2,107.71</u>	<u>\$ 3,479.17</u>	<u>\$ 1,500.00</u>	<u>\$ 1,473.65</u>

	<u>1 9 3 8</u>	<u>1 9 3 9</u>	<u>1 9 4 0</u>	<u>1 9 4 1</u>
Enlargement of Airways	\$ 20,519.99	\$ 23,499.29	\$ 16,842.28	\$ 15,756.36
Alterations to Bank- head making Nut Coal	1,999.37			
	<u>\$ 22,519.36</u>	<u>\$ 23,499.29</u>	<u>\$ 16,842.28</u>	<u>\$ 15,756.36</u>

	<u>1 9 4 2</u>	<u>1 9 4 3</u>	<u>1 9 4 4</u>
Enlargement of Airways	\$ 9,641.12	\$ 4,535.13	\$ 1,330.89
	<u>\$ 9,641.12</u>	<u>\$ 4,535.13</u>	<u>\$ 1,330.89</u>

COLLIERY NO. 10

	<u>1 9 3 5</u>	<u>1 9 3 6</u>	<u>1 9 3 7</u>	<u>1 9 3 8</u>
Inter Cooler for Rank Engine	\$ 5,462.24			
Tuggers	1,265.66	\$ 1,275.34		
6 Radial Coal Cutters			\$ 5,135.40	\$ 3,552.30
6 Jack Hammers			1,766.54	1,080.64
	<u>\$ 6,727.90</u>	<u>\$ 1,275.34</u>	<u>\$ 6,901.94</u>	<u>\$ 4,632.94</u>
	<u>1 9 3 9</u>	<u>1 9 4 0</u>	<u>1 9 4 1</u>	<u>1 9 4 2</u>
	Nil	Nil	Nil	Nil
	<u>1 9 4 3</u>	<u>1 9 4 4</u>		
	Nil	Nil		

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K. J. MorrisonCOLLIERY NO. 11

	<u>1 9 3 5</u>	<u>1 9 3 6</u>	<u>1 9 3 7</u>
Tuggers		\$ 1,274.80	
Pumps		193.23	\$3,798.81
Fan Drive	\$ 1,113.21		
Leyner Sharpening Outfit	2,825.82		
4 Air Pumps		1,711.29	1,188.35
1 Lathe			1,049.45
Radial Coal Cutters			3,354.42
Air Engines			3,407.63
Installations to Prepare Nut Coal			2,983.24
Installing 30" Belt for Nut Coal			1,413.17
	<u>\$ 3,939.03</u>	<u>\$ 3,179.32</u>	<u>\$17,195.07</u>

	<u>1 9 3 8</u>	<u>1 9 3 9</u>
Radial Coal Cutters	\$ 1,759.02	
Jack Hammers	540.21	
2 Drop Hoists	5,414.08	
New Bridge		\$ 630.86
Building First Aid Room		1,095.52
	<u>\$ 7,713.31</u>	<u>\$1,726.38</u>

COLLIERY NO. 12

	<u>1 9 3 3</u>	<u>1 9 3 5</u>	<u>1 9 3 6</u>
Install Timber Hoists	\$ 1,000.00		
Car Puller		\$ 1,923.81	
2 M. & C. Coal Cutters		6,108.64	
Conveyor Troughing		5,523.21	
Flottpen Engines		2,361.00	
Jeffrey Conveyor Drive and Tail Stock			\$ 1,910.35
Shaker Troughing			3,692.62
	<u>\$ 1,000.00</u>	<u>\$15,916.66</u>	<u>\$ 5,602.97</u>

	<u>1 9 3 7</u>	<u>1 9 3 8</u>	<u>1 9 3 9</u>
Conveyor Troughing	\$11,487.78		
Flottpen Engines	632.91		
Jeffrey Conveyor Drive and Tail Stock	2,756.08		
Spare Motor Air Shaft Fan	2,263.58		
Improvements to Screening Plant	7,188.18	\$ 118.47	
Tuggers		1,249.63	
Radial Coal Cutters		2,146.74	
Main Tail Haulage		8,799.01	
14 B. Belt Installation		14,401.29	\$ 355.16
Longwall Pans			3,299.15
Telesopic Loaders			7,720.00
	<u>\$ 24,328.53</u>	<u>\$26,715.14</u>	<u>\$11,374.31</u>

COLLIERY NO. 12 (Cont'd.)

	<u>1 9 4 0</u>	<u>1 9 4 1</u>	<u>1 9 4 2</u>
Conveyor Troughing	\$ 3,407.20	\$ 10,090.50	\$ 5,588.44
Telesopic Loaders		4,100.00	
8 x 11 Hoists			17,414.00
Shaker Engines			1,831.63
Inverted Conveyor Troughing			7,423.94
	<u>\$ 3,407.20</u>	<u>\$ 14,190.50</u>	<u>\$ 32,258.01</u>

	<u>1 9 4 3</u>	<u>1 9 4 4</u>
Conveyor Troughing	\$ 8,702.98	
Inverted Conveyor Troughing		\$ 12,459.60
Girders	31,453.65	39,199.75
Electrification of Man Rake	8,118.74	100.00
	<u>\$ 48,275.37</u>	<u>\$ 51,759.35</u>

COLLIERY NO. 16

	<u>1 9 3 4</u>	<u>1 9 3 5</u>	<u>1 9 3 6</u>
Airways Construction	\$ 17,788.90		
9 West Level Haulage	5,280.00		
2 Coal Cutters		\$ 3,032.21	
Conveyor Troughing		3,040.36	
688' Conveyor Fans			\$ 2,000.00
Tugger Hoists			1,000.00
	<u>\$ 23,068.90</u>	<u>\$ 6,072.57</u>	<u>\$ 3,000.00</u>

	<u>1 9 3 7</u>	<u>1 9 3 8</u>	<u>1 9 3 9</u>
Conveyor Troughing	\$ 4,247.04		
Lamp Cabin Extension	1,258.40	\$ 147.60	
Radial Coal Cutters		1,183.40	
Leyner Sharpener Drill		2,239.45	
Alteration to Bankhead to handle Duty Coal			\$ 7,300.80
Extension of Supt. Office			545.90
Enlargement of Airways		30,158.43	51,793.58
	<u>\$ 5,505.44</u>	<u>\$ 33,728.88</u>	<u>\$ 59,640.28</u>

	<u>1 9 4 0</u>	<u>1 9 4 1</u>	<u>1 9 4 2</u>
Conveyor Troughing		\$ 19,367.80	\$ 5,434.70
Lamp Cabin Extension			854.32
Alteration to Bankhead to handle Duty Coal	32.77		
Extension of Supt. Office	115.68		
Enlargement of Airways	27,356.40	27,138.50	12,603.65
Flight Conveyor			2,606.00
Inverted Conveyor Troughing			3,189.76
750 K.V.A. Transformers			5,107.81
	<u>\$ 27,504.85</u>	<u>\$ 46,506.30</u>	<u>\$ 29,796.24</u>

ITEMS OF A CAPITAL NATURE INCLUDED IN OPERATIONS (Cont'd)COLLIERY NO. 16 (Cont'd).

	<u>1 9 4 3</u>	<u>1 9 4 4</u>
Enlargement of Airways	\$ 10,536.27	\$ 2,950.48
Flight Conveyor		2,591.00
Inverted Conveyor Troughing	4,515.84	16,332.08
40 H.P. Turbines		2,014.44
Machine Shop Extension		5,831.14
	<u>\$ 15,052.11</u>	<u>\$ 29,719.14</u>

COLLIERY NO. 18

	<u>1 9 4 2</u>	<u>1 9 4 3</u>
Pumps	\$ 3,598.85	\$ 3,209.63
Enlargement of airways	3,771.88	5,358.23
	<u>\$ 7,370.73</u>	<u>\$ 8,267.86</u>

COLLIERY NO. 20

	<u>1 9 3 9</u>	<u>1 9 4 1</u>	<u>1 9 4 2</u>
Fan	\$ 1,074.71		
Airways		\$13,783.98	\$ 37,625.16
Prospecting Hub-seam		1,989.08	
Longwall Equipment			13,835.56
	<u>\$ 1,074.71</u>	<u>\$15,773.06</u>	<u>\$ 51,460.72</u>
	<u>1 9 4 3</u>	<u>1 9 4 4</u>	
Airways	\$41,682.80	\$56,832.47	
Longwall Equipment	43,772.02	44,900.79	
Inverted Troughing		8,816.64	
	<u>\$85,454.82</u>	<u>\$110,549.90</u>	

COLLIERY NO. 24

	<u>1 9 3 4</u>	<u>1 9 3 5</u>	<u>1 9 3 6</u>
60 Cycle Power	\$ 3,000.00		
Man Rake Hoist	3,300.00	\$ 398.99	
Building Vault	376.62		
Tuggers			\$ 1,274.80
	<u>\$ 6,676.62</u>	<u>\$ 398.99</u>	<u>\$ 1,274.80</u>
	<u>1 9 3 7</u>	<u>1 9 3 8</u>	<u>1 9 3 9</u>
1 Lathe	\$ 1,617.91		
Jack Hammer		\$ 360.40	
Hoist		13,115.66	
Radial Coal Cutters		1,284.15	
Electric Coal Cutters		5,000.00	
Enlargement of Airways		14,715.67	\$10,223.25
	<u>\$ 1,617.91</u>	<u>\$54,475.88</u>	<u>\$10,223.25</u>

ITEMS OF CAPITAL NATURE INCLUDED IN OPERATIONS (Cont'd)

COLLIERY NO. 24 (Cont'd)	<u>1 9 4 0</u>	<u>1 9 4 1</u>	<u>1 9 4 2</u>
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Enlargement of Airways	\$ 3,158.34		
Improvement to Water Supply		\$ 2,416.91	\$ 366.66
Haulage Engine			5,210.23
Lamp House Extension			908.10
	\$ <u>3,158.34</u>	\$ <u>2,416.91</u>	\$ <u>6,484.99</u>

<u>1 9 4 3</u>	<u>1 9 4 4</u>
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<u>Flood Damage</u>	\$ <u>23,088.00</u>	\$ <u>987.97</u>
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<u>1 9 3 3</u>	<u>1 9 3 4</u>	<u>1 9 3 5</u>	<u>1 9 3 6</u>
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Total Collieries	\$ <u>1,000.00</u>	\$ <u>50,244.34</u>	\$ <u>66,634.74</u>	\$ <u>27,496.08</u>
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<u>1 9 3 7</u>	<u>1 9 3 8</u>	<u>1 9 3 9</u>	<u>1 9 4 0</u>
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Total Collieries	\$ <u>59,678.54</u>	\$ <u>153,027.19</u>	\$ <u>116,161.78</u>	\$ <u>50,912.67</u>
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<u>1 9 4 1</u>	<u>1 9 4 2</u>	<u>1 9 4 3</u>	<u>1 9 4 4</u>
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Total Collieries	\$ <u>102,615.63</u>	\$ <u>165,024.64</u>	\$ <u>205,476.98</u>	\$ <u>238,058.55</u>
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Total Fire Damage		\$ <u>271,251.62</u>	\$ <u>64,333.19</u>
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Total Flood Damage		\$ <u>23,088.00</u>	\$ <u>987.97</u>
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SYDNEY AND LOUISBURG RAILWAY

<u>1 9 4 1</u>	<u>1 9 4 2</u>	<u>1 9 4 3</u>	<u>1 9 4 4</u>
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New Boiler Engines	\$ 13,561.43		\$ 18,532.93	\$ 18,463.61
Coaling Station	4,200.97	458.56		
Purchase & Repair				
2 Locomotives	45,005.65	1,087.37		
Mira Bridge -				
Foundation		15,789.41		
New Span		30,643.82		
Saddle Tank Locomotive		6,400.58		

\$ <u>62,768.05</u>	\$ <u>54,379.74</u>	\$ <u>18,532.93</u>	\$ <u>18,463.61</u>
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<u>MISCELLANEOUS</u>	<u>1 9 3 2</u>	<u>1 9 3 5</u>	<u>1 9 3 6</u>
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International Pier - Fire			
Protection			\$ 10,759.06
Pit Timber Loader		\$ 1,033.38	99.00
Prospecting Gardiner and			
Emery Seam		7,662.42	8,913.87
New Truck		4,058.44	.18
Motor Truck Scale - Glace Bay			1,632.13
Install K.V.A. Transformer	\$ 13,200.00		

\$ <u>13,200.00</u>	\$ <u>12,754.24</u>	\$ <u>21,402.24</u>
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ITEMS OF A CAPITAL NATURE INCLUDED IN OPERATIONS (Cont'd)

<u>MISCELLANEOUS (Cont'd)</u>	<u>1 9 3 7</u>	<u>1 9 3 8</u>	<u>1 9 3 9</u>
Prospecting Gardiner and Emery Seam	\$ 410.75		\$11,152.61
Prospecting Emery and Gowrie Seam	26,944.20		
Domestic Coal Trestle No.11	1,827.44		
Prospecting Crop Openings		\$19,330.90	
General Warehouse Office		2,000.00	
New Screens - Windmill Point			2,560.00
Conveyor - I. Pier			4,274.48
Extension to Bridge Bank			4,016.16

\$29,182.39 \$21,330.90 \$22,003.25

1 9 4 0 1 9 4 1 1 9 4 2

Prospecting Gardiner and Emery Seam	\$ 9,158.68		
Office Pier, Halifax	626.83		
Coal Storage Wall		\$ 3,002.75	
Railway Siding - Halifax			\$ 2,020.66
Coal Conveyor - Louisburg		977.80	2,469.89
Standby Fire Pumps			1,247.70
Loading Stage		1,518.00	
Trimmers' Rest House - I. Pier		1,628.73	
Bunker Conveyor - Louisburg		3,296.29	

500 K.V.A. Transformer	2,410.00		
Storage Shed - Sterling Yard	1,490.55		328.84
Motors	2,038.30		
Building for Steam Shovel	120.00	10,153.22	
Installing Machines in Machine Shop		8,174.59	1,344.29
Wash House - Central Power Plant			498.14

\$15,844.36 28,751.38 \$ 7,909.52

1 9 4 3 1 9 4 4

Prospecting Gardiner and Emery Seam		\$ 2,019.59	
Motors	\$ 4,864.86		
McCoa Breathing Equipment		4,884.59	

\$ 4,864.86 \$ 6,904.18

<u>CUMBERLAND</u>	<u>1 9 4 2</u>	<u>1 9 4 3</u>	<u>1 9 4 4</u>
Conveyor Troughing	\$ 3,626.05	\$ 3,308.29	\$18,427.20
12 H.P. Tuggers		3,316.50	1,990.40
Shaker Engine		554.38	
Fan-Way			20,614.49

\$ 3,626.05 \$ 7,179.17 \$21,032.09

DOMINION COAL COMPANY LIMITED

SUMMARY OF RESERVE FOR BETTERMENTS AND EXTENSIONS - 1932 TO 1944

Items of a Capital Nature	1 9 3 2	1 9 3 3	1 9 3 4	1 9 3 5
Collieries	\$ 26,354.89	\$44,836.17	\$354,006.88	\$467,460.92
Agencies	2,995.39		28,434.58	9,868.00
Piers & Tugs				
S. & L. Railway				
Miscellaneous			110,234.63	17,989.02
	<u>\$ 29,350.28</u>	<u>\$44,836.17</u>	<u>\$492,676.09</u>	<u>\$495,317.94</u>
Other Items				
Collieries		12,194.36	6,848.66	4,318.39
Agencies	11,932.10	18,574.65	61,681.45	65,277.22
Piers and Tugs	4,911.32	4,963.34	34,418.97	31,000.54
S. & L. Railway				
Miscellaneous	32,580.84	2,053.53	3,615.95	
	<u>\$49,424.26</u>	<u>\$37,785.88</u>	<u>\$106,565.03</u>	<u>\$100,596.15</u>
Total Debits to Reserve	<u>\$78,774.54</u>	<u>\$82,622.05</u>	<u>\$599,241.12</u>	<u>\$595,914.09</u>
Charges to				
Cost of Coal	\$160,669.62	\$259,978.04	\$372,691.92	\$174,743.92
Agencies)				
Piers)				
S. & L. Rly.)	70,641.78	494,836.35	970,221.51	90,831.03
Banking)				
Miscellaneous)				
	<u>\$ 231,311.40</u>	<u>\$ 754,814.39</u>	<u>\$ 1,342,913.43</u>	<u>\$265,574.95</u>
Reserve for Renewals and Betterments				
Balance fwd.	703,747.63	895,103.08	1,562,742.26	2,336,419.85
Charged to				
Profit & Loss				
Dominion	231,311.40	754,814.39	1,342,913.43	265,574.95
Cumberland	50,340.60	95,732.55	140,143.54	67,934.25
	<u>\$ 985,399.63</u>	<u>\$1,745,650.02</u>	<u>\$3,045,799.23</u>	<u>\$2,669,929.05</u>
Expenditure				
Dominion	78,774.54	82,622.05	599,241.12	595,914.09
Cumberland	11,522.01	100,285.71	110,138.26	91,663.82
Transfer to Reserve for Income Tax				
Balance at end of year	<u>\$ 895,103.08</u>	<u>\$1,562,742.26</u>	<u>\$2,336,419.85</u>	<u>\$1,982,351.14</u>
Increase in Reserve	<u>\$ 191,355.45</u>	<u>\$ 667,639.18</u>	<u>\$ 773,677.59</u>	
Decrease in Reserve				<u>\$354,068.71</u>

SUMMARY OF RESERVE..continued.

Items of a Capital Nature	<u>1 9 3 6</u>	<u>1 9 3 7</u>	<u>1 9 3 8</u>	<u>1 9 3 9</u>
Collieries	\$ 400,868.31	\$408,812.61	\$399,925.53	\$ - 2,393.33
Agencies	21,193.98			5,445.17
Piers and Tugs		14,821.15	115.06	
S. & L. Rly.		41,382.23		
Miscellaneous	<u>178,047.36</u>	<u>27,371.04</u>		<u>19,973.50</u>
	<u>\$ 600,109.65</u>	<u>\$492,387.03</u>	<u>\$400,040.59</u>	<u>\$ 23,025.14</u>

Other Items

Collieries	23,703.78	34,516.99	8,630.24	3,175.96
Agencies	41,281.03	55,903.69	46,663.11	72,214.40
Piers and Tugs	20,548.93	59,685.11	12,631.55	55,081.84
S. & L. Rly.				
Miscellaneous				<u>4,016.16</u>
	<u>85,533.74</u>	<u>150,105.79</u>	<u>67,924.90</u>	<u>134,488.36</u>

Total Debits
to Reserve

\$ 685,643.39 \$642,492.82 \$467,965.49 \$157,513.50

Charges to

Cost of coal	409,421.52	310,482.12	70,273.63	461,483.32
Agencies)	71,092.51)			73,038.19
Piers)	23,750.00)	216,112.46	104,226.86	72,259.45
S. & L. Rly.)				
Banking)	83,301.39)			8,781.91
Miscellaneous)	31,437.46)			
	<u>\$619,002.88</u>	<u>\$526,594.58</u>	<u>\$174,500.49</u>	<u>\$615,562.87</u>

Reserve for
Renewals and
Betterments

Balance fwd. \$1,982,351.14 \$1,901,852.54 \$1,414,350.02 \$1,703,793.49

Charged to
Profit & Loss

Dominion	619,002.88	526,594.38	174,500.49	615,562.87
Cumberland	<u>19,355.24</u>	<u>86,204.85</u>	<u>23,229.25</u>	<u>82,122.60</u>
	2,620,709.26	2,514,651.97	1,612,079.76	1,771,478.96

Expenditure -

Dominion	685,643.39	642,492.82	467,965.49	157,513.50
Cumberland	<u>33,213.33</u>	<u>57,809.13</u>	<u>70,320.78</u>	<u>1,893.35</u>

Transfer to
Reserve for
Income Tax

400,000.00

Balance at
end of year

\$ 1,901,852.54 \$1,414,350.02 \$1,073,793.49 \$1,612,072.11

Increase in
Reserve

\$538,278.62

Decrease in
Reserve

\$ 80,498.60 \$487,502.52 \$340,556.53

SUMMARY OF RESERVE.. continued

Items of a Capital Nature	<u>1 9 4 0</u>	<u>1 9 4 1</u>	<u>1 9 4 2</u>
Collieries	\$ 42,565.74	\$ 172,690.68	\$ 134,541.02
Agencies	68,190.54	56,686.28	2,306.31
Piers and Tugs			
S. & L. Rly.		47,637.98	84,077.62
Miscellaneous	<u>218,399.41</u>		<u>15,734.32</u>
	<u>\$ 329,155.69</u>	<u>\$ 277,014.94</u>	<u>\$ 236,689.27</u>
<u>Other Items</u>			
Collieries	\$ 6,479.18		
Agencies	79,859.25	\$ 204,188.22	\$ 107,612.60
Piers and Tugs	34,745.67	149,465.06	82,919.13
S. & L. Rly.	16,279.33	34,665.60	22,811.62
Miscellaneous			
	<u>137,363.43</u>	<u>388,318.88</u>	<u>213,343.35</u>
Total Debits to Reserve	<u>\$ 466,519.12</u>	<u>\$ 665,333.82</u>	<u>\$ 450,032.62</u>
<u>Charges to</u>			
Cost of Coal	503,664.54	443,578.66	232,801.71
Agencies	88,661.44	164,815.43	109,948.91
Piers	46,000.00	105,009.51	82,919.13
S. & L. Rly.	16,279.33	82,303.78	106,889.24
Banking	174,586.92	49,380.00	
Miscellaneous			<u>15,734.32</u>
	<u>\$ 824,192.03</u>	<u>\$ 845,087.38</u>	<u>\$ 548,293.31</u>
<u>Reserve for Renewals and Betterments</u>			
Balance fwd.	1,612,072.11	2,022,801.24	2,170,119.69
<u>Charged to Profit & Loss</u>			
Dominion	824,192.03	845,087.38	548,293.31
Cumberland	89,067.90	99,079.35	80,624.91
	<u>2,525,332.04</u>	<u>2,966,967.97</u>	<u>2,799,037.91</u>
<u>Expenditure -</u>			
Dominion	665,333.82	450,032.62	385,628.31
Cumberland	131,514.46	33,546.13	17,060.62
Balance at end of year	<u>\$ 2,170,119.69</u>	<u>\$ 2,315,459.16</u>	<u>\$ 2,315,459.16</u>
Increase in Reserve	<u>\$ 410,729.13</u>	<u>\$ 147,318.45</u>	<u>\$ 145,339.47</u>

SUMMARY OF RESERVE... continued

Items of a Capital Nature	1943	1944	Total 1932-1933
Collieries	\$ 165,100.89	\$ 287,829.53	\$2,902,599.84
Agencies			195,150.25
Piers and Tugs			14,936.21
S. & L. Rly.			173,097.83
Miscellaneous			587,749.08
	<u>\$ 165,100.89</u>	<u>\$ 287,829.53</u>	<u>\$3,873,533.21</u>
<u>Other Items</u>			
Collieries			
Agencies	\$ 85,677.67	\$ 121,525.98	
Piers and Tugs	116,316.82	81,280.86	
S. & L. Rly.	18,532.93	18,925.61	
Miscellaneous			
	<u>\$ 220,527.42</u>	<u>\$ 221,732.45</u>	<u>\$ 1,913,709.64</u>
Total Debits to Reserve	<u>\$ 385,628.31</u>	<u>\$ 509,561.98</u>	<u>\$ 5,787,242.85</u>
<u>Charges to</u>			
Cost of Coal	\$ 165,100.89	\$ 287,829.53	
Agencies	85,677.67	121,525.98	
Piers	116,316.82	81,280.86	
S. & L. Rly.	18,532.93	18,925.61	
Banking			
Miscellaneous			
	<u>\$ 385,628.31</u>	<u>\$ 509,561.98</u>	<u>\$ 7,643,038.00</u>
<u>Reserve for Renewals and Betterments</u>			
Balance fwd.	\$ 2,315,459.16	\$ 2,315,459.16	\$ 703,747.63
<u>Charged to Profit & Loss</u>			
Dominion	\$ 385,628.31	\$ 509,561.98	\$ 7,643,038.00
Cumberland	17,060.62	50,235.74	901,131.40
	<u>\$2,718,148.09</u>	<u>\$ 2,875,256.88</u>	<u>\$ 9,247,917.03</u>
<u>Expenditure -</u>			
Dominion	\$ 385,628.31	\$ 509,561.98	\$ 5,787,242.85
Cumberland	17,060.62	50,235.74	745,215.02
<u>Transfer to Reserve for Income Tax</u>			
	<u>\$ 2,315,459.16</u>	<u>\$ 2,315,459.16</u>	<u>\$ 2,315,459.16</u>
<u>Increase in Reserves</u>			
			\$ 2,874,337.89
<u>Decrease in Reserve</u>			
			<u>\$ 1,262,626.36</u>
<u>Net Increase</u>			
			<u>\$ 1,611,711.53</u>

DOMINION COAL COMPANY LIMITEDITEMS OF A CAPITAL NATURE
CHARGED TO RESERVE FOR RENEWALS AND BETTERMENTS.

<u>COLLIERY 1.B</u>	<u>1932</u>	<u>1933</u>	<u>1934</u>	<u>1935</u>
Tunnel to Harbor Seam			\$ 1,563.98	\$ 42,816.30
Back Pit Tunnell			18,387.67	12,832.90
Longwall Equipment			26,725.32	9,737.49
600 H. P. Motor				4,811.15
3000 C.F.M. Compressor				26,709.44
			<u>\$ 46,676.97</u>	<u>\$ 96,907.28</u>

<u>COLLIERY NO. 2</u>				
Tunnel to Harbor Seam		\$ 40,777.47	\$ 63,628.57	
Man Hoist Drum		6,277.39	953.55	
Coal Hoist Drum		7,788.59	1,424.18	
Longwall Equipment		11,661.80	48,901.07	
150 K.V.A. Transformer			5,133.50	
Fan			1,615.40	
North Angle Deep Haulage			6,690.46	
		<u>\$ 66,505.25</u>	<u>\$ 128,346.73</u>	

<u>COLLIERY NO. 4</u>				
Main Haulage Transfer	\$ 3,631.41			
Tunnel to Harbor Seam		253.00	\$ 28,277.92	
M. & T. Haulage		2,333.31	3,266.69	
Man Rake Electrification			6,467.20	
Drop Hoise 16 and 18 West Level			34.42	
	<u>\$ 3,631.41</u>	<u>\$ 2,486.31</u>	<u>\$ 38,046.23</u>	

<u>COLLIERY NO. 10</u>				
Nos. 5 and 10 Boiler	\$ 2,132.37			
Install Boiler Drums		\$ 3,076.25		
Southside Longwall Electrifications		\$ 44,947.31	\$ 19,726.84	
New Colliery Office		3,969.02	186.34	
New North Deep Pump			1,707.12	
	<u>\$ 2,132.37</u>	<u>\$ 3,076.25</u>	<u>\$ 48,916.33</u>	<u>\$ 21,620.30</u>

Items of a Capital Nature charged to Reserve for Renewals and Betterments, continued.

	<u>1 9 3 6</u>	<u>1 9 3 7</u>	<u>1 9 3 8</u>
<u>COLLIERY 1.B</u>			
Tunnel to Harbor Seam	\$70,328.58	\$57,967.45	\$24,398.88
Back Pit Tunnell	13,430.46	1,685.23	
Longwall Equipment		6,552.00	75,843.93
New Rotor 60 Cycle Hoist Motor	9,249.50		
150 H.P. Drop Hoise	7,005.81	6,195.75	
Wash House Extension	3,762.01	8,719.57	
Spare Rotor			16,862.65
	<u>\$103,776.36</u>	<u>\$ 81,120.00</u>	<u>\$ 117,105.46</u>
<u>COLLIERY NO. 2</u>			
Tunnel to Harbor Seam	\$ 90,394.40	\$ 74,754.58	\$34,698.46
Man Hoist Drum	4,083.07	513.53	
Fan	767.09		
North Angle Deep Haulage	28,180.48	7.48	
Tank for Transformer			69,651.27
	<u>\$123,425.04</u>	<u>\$ 75,275.59</u>	<u>\$104,349.73</u>
<u>COLLIERY NO. 4</u>			
Tunnel to Harbor Seam	\$ 40,184.86	\$ 33,192.91	\$ 14,124.23
Drop Hoist 16 and 18 West Level	10,413.20		
	<u>\$ 50,598.06</u>	<u>\$ 33,192.91</u>	<u>\$ 14,124.23</u>
<u>COLLIERY NO. 10</u>			
Install Boiler Drums	7,490.54		
	<u>\$ 7,490.54</u>		

Items of a Capital Nature charged to Reserve for Renewals and Betterments, continued.

	<u>1 9 3 9</u>	<u>1 9 4 0</u>	<u>1 9 4 1</u>
<u>COLLIERY 1.B</u>			
Tunnel to Harbor Seam		\$26,633.99	\$73,905.88
Back Pit Tunnel			7,984.88
Longwall Equipment			19,570.00
Enlargement of Airways	\$ 8,723.50		
No. 7 Relay Hoist		220.63	23,623.55
30" Belt Conveyor			<u>1,407.43</u>
	<u>\$ 8,723.50</u>	<u>\$26,854.62</u>	<u>\$126,491.74</u>

COLLIERY NO. 2.

Tank for Transformer	-18,579.97	-16,259.89	-18,140.00
Ventilation Shaft	<u>2,811.39</u>		
	<u>\$ -15,768.58</u>	<u>\$ -16,259.89</u>	<u>\$ -18,140.00</u>

	<u>1 9 4 2</u>	<u>1 9 4 3</u>	<u>1 9 4 4</u>
<u>COLLIERY 1.B</u>			
Tunnel to Harbor Seam	\$49,671.50	\$27,936.45	\$22,035.38
Back Pit Tunnel	1,132.01		
Wash House Extension	6,516.80	-117.36	
Enlargement of Airways	18,998.68		44,580.61
No. 7 Relay Hoist	45,855.07	115,445.39	29,245.07
30" Belt Conveyor	<u>12,366.96</u>		
	<u>\$ 134,541.02</u>	<u>\$ 143,264.48</u>	<u>\$ 95,861.06</u>

COLLIERY NO. 2

Ventilation Shaft	<u>\$ 2,102.40</u>	<u>\$132,622.66</u>
	\$ 2,102.40	\$132,622.66

COLLIERY NO. 4

Wash House Extension	\$ 1,441.19	5,090.50
Airway Extension		<u>4,424.83</u>
	<u>\$ 1,441.19</u>	<u>\$ 9,515.33</u>

Items of a Capital Nature charged to Reserve for Renewals and Betterments, continued.

	<u>1932</u>	<u>1933</u>	<u>1934</u>
<u>COLLIERY NO. 12</u>			
New Driver and Clutch for Hoist	\$17,046.16		
No. 14 Motor Driven Pump	3,544.95		
Booster Fan No. 11 Lever		\$ 2,548.22	
Install Two Boiler Drums Ventilating Shaft		4,670.60	\$ 61.92
Belt Conveyor 13 and 14 East Levels		34,541.10	140,482.91
Wash House Extension			6,225.58
No. 14 West Pumping			7,476.23
No. 14 Fan Motor and Drive			16,709.04
			6,302.31
	<u>\$ 20,591.11</u>	<u>\$ 41,759.92</u>	<u>\$ 177,257.99</u>

<u>COLLIERY NO. 16</u>			
Longwall Equipment			5,711.94
Motor Driven Deep Pumps			1,633.22
Wash House Extension			4,818.87
			<u>\$ 12,164.03</u>

	<u>1 9 3 5</u>	<u>1 9 3 6</u>	<u>1 9 3 7</u>
<u>COLLIERY NO. 11</u>			
Electrical Endless Haulage		\$ 4,809.77	\$ 1,112.65
New Drum Boilers		6,769.59	
Endless Haulage Machine		5,211.16	408.66
Two Electric Compressors		2,870.33	62,175.21
Wash House Extension		39.34	11,059.20
		<u>\$ 19,700.19</u>	<u>\$ 74,755.72</u>

<u>COLLIERY NO. 12</u>			
Belt Conveyor 13 and 14 East Levels	\$ 37,206.66	\$ 11,501.29	
Wash House Extension	1,410.77		
No. 14 West Pumping		3,670.15	
250 K.V.A. Transformer	2,000.00		
Pit Tubs and Tipple	83,504.70		
Electrify Belt Drive		2,740.83	\$ 1,069.91
Pump Electrification		7,567.84	
No. 14 West Level Haulage		5,056.04	
Conveyor Unit		603.61	17,152.98
New Office Building		2,866.95	2,691.49
Electrify Underground Conveyor			2,531.15
Longwall Equipment			22,461.90
	<u>\$124,122.13</u>	<u>\$ 34,006.71</u>	<u>\$ 45,907.43</u>

<u>COLLIERY NO. 16</u>			
Longwall Equipment			\$ 8,185.58
Motor Driven Deep Pumps	8,442.33	1,717.90	
Wash House Extension	181.13		
Gate Belt Conveyor	21,799.33		
Belt Conveyor	237.98	33,766.23	22,350.19
Electric Haulage Engine			8,013.95
Air Compressor			8,094.72
Relay Hoist			20,890.40
Electric Compressor			31,026.12
	<u>\$50,660.77</u>	<u>\$ 35,484.13</u>	<u>\$ 98,560.96</u>

Items of a Capital Nature charged to Reserve for Renewals and
Betterments, continued

<u>COLLIERY NO. 12</u>	<u>1 9 3 8</u>	<u>1 9 3 9</u>	<u>1 9 4 0</u>
Electrify Underground Conveyor	\$ 4,150.51	\$ - 89.90	
Double Drum Haulage Engine	2,735.82	2,834.92	
Centrifugal Pump No. 14		200.09	\$ 2,485.73
Fan No. 14		1,603.71	9,724.94
	<u>\$ 6,886.33</u>	<u>\$ 4,548.82</u>	<u>\$ 12,210.67</u>

<u>COLLIERY NO. 16</u>			
Relay Hoist	\$ 147,744.79	\$ 102.93	\$ -4,000.00
Electric Compressor	1,690.40		
Two Telescope Leaders	8,024.59		
	<u>\$ 157,459.78</u>	<u>\$ 102.93</u>	<u>\$ -4,000.00</u>

<u>COLLIERY NO. 12</u>	<u>1 9 4 1</u>	<u>1 9 4 4</u>
Belt Conveyor 13 and 14 East Levels		\$ 20,739.16
		<u>\$ 20,739.16</u>

<u>COLLIERY NO. 16</u>		
Fan	\$ 44,272.96	
Airway Extension	20,065.98	\$ 18,390.64
	<u>\$ 64,338.94</u>	<u>\$ 18,390.64</u>

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Items of a Capital Nature charged to Reserve for Renewals and Betterments, continued

	<u>1 9 3 2</u>	<u>1 9 3 3</u>	<u>1 9 4</u>
TOTAL COLLIERIES	<u>\$ 26,354.89</u>	<u>\$ 44,836.17</u>	<u>\$ 354,066.88</u>
COLLIERY NO. 24	<u>1 9 3 5</u>	<u>1 9 3 6</u>	<u>1 9 3 7</u>
60 Cycle Power			<u>1 9 3 8</u>
Underground	\$27,757.48	\$7,887.28	
Electric Coal Cutters		<u>18,500.00</u>	
	<u>\$27,757.48</u>	<u>\$26,387.28</u>	
TOTAL COLLIERIES	<u>\$ 467,460.92</u>	<u>\$ 400,868.31</u>	<u>\$ 408,812.61</u>
			<u>\$ 399,925.53</u>
COLLIERY NO. 24	<u>1 9 3 9</u>	<u>1 9 4 0</u>	<u>1 9 4 1</u>
Mining Machines		\$21,456.53	
Addition to Wash House		<u>2,303.81</u>	
		<u>\$23,760.34</u>	
TOTAL COLLIERIES	<u>\$ -2,593.33</u>	<u>\$ 42,565.74</u>	<u>\$ 172,690.68</u>
COLLIERY NO. 18	<u>1 9 4 2</u>	<u>1 9 4 3</u>	<u>1 9 4 4</u>
1200 H.P. Motors			<u>\$ 10,700.68</u>
COLLIERY NO. 20			
15 Ton Locomotive		<u>\$18,292.82</u>	
TOTAL COLLIERIES	<u>\$134,541.02</u>	<u>\$165,100.89</u>	<u>\$287,829.53</u>

ITEMS CHARGED TO RESERVE FOR RENEWALS AND BETTERMENTS

<u>AGENCIES</u>	<u>1 9 3 2</u>	<u>1 9 3 3</u>	<u>1 9 3 4</u>
Items of a Capital Nature			
Centrifugal Pump - Windmill Point	\$ 2,995.39		
Centerpillar Crane - Windmill Point			\$15,765.00
Caterpillar Crane - Windmill Point			8,250.00
Belt Conveyor - Windmill Point			4,212.00
Freight Loaders-Montreal			207.58
	<u>\$ 2,995.39</u>		<u>\$ 28,434.58</u>
Other Items			
Repairs	11,932.10	\$17,876.98	\$ 60,015.78
Replace Hoise -W.St. John		697.67	
Pump Renewal-Windmill Pt.			1,665.67
	<u>\$ 11,932.10</u>	<u>\$18,574.65</u>	<u>\$ 61,681.45</u>

<u>AGENCIES</u>	<u>1 9 3 5</u>	<u>1 9 3 6</u>	<u>1 9 3 7</u>	<u>1 9 3 8</u>
Items of a Capital Nature				
Caterpillar Crane - Windmill Point	\$ 3,300.00			
Freight Loaders - Montreal	4,000.00			
Truck Loading Conveyor - Halifax	2,568.00			
Scale House - Windmill Point		\$ 6,530.05		
Deisel Crane, Windmill Point		14,663.93		
	<u>\$ 9,868.00</u>	<u>\$ 21,193.98</u>		
Other Items				
Repairs	\$63,023.18	\$36,899.16	\$55,903.69	\$46,663.11
Rebore Cylinders - Wright Engines	2,254.04			
Repairs, Locomotive Crane		1,129.07		
Repairs, Sup't. Office- Montreal		3,252.80		
	<u>\$65,277.22</u>	<u>\$41,281.03</u>	<u>\$55,903.69</u>	<u>\$46,663.11</u>

ITEMS CHARGED TO RESERVE FOR RENEWALS AND BETTERMENTS

<u>AGENCIES</u>	<u>1 9 3 9</u>	<u>1 9 4 0</u>	<u>1 9 4 1</u>
<u>Items of a Capital Nature</u>			
Boiler - W. St. John	₹ 3,466.96		
Barge - Lucia P. Dow		₹29,449.98	
Minas King		8,831.85	
Freeman		₹,696.59	₹30,179.27
Crano, Halifax		10,576.69	
St. John		12,301.74	
Wharf - St. John			26,507.01
Truck Scale - Halifax	<u>1,978.21</u>	<u>2,333.69</u>	
	<u>₹ 5,445.17</u>	<u>₹ 68,190.54</u>	<u>₹ 56,686.28</u>
<u>Other Items</u>			
Repairs	<u>₹72,214.40</u>	<u>₹ 79,859.25</u>	<u>₹204,188.22</u>

<u>AGENCIES</u>	<u>1 9 4 2</u>	<u>1 9 4 3</u>	<u>1 9 4 4</u>
<u>Items of a Capital Nature</u>			
Wharf, St. John	<u>₹2,336.31</u>		
<u>Other Items</u>			
Repairs	<u>107,612.60</u>	<u>₹ 85,677.67</u>	<u>₹121,525.98</u>
	<u>₹ 107,612.60</u>	<u>₹ 85,677.67</u>	<u>₹121,525.98</u>

DOMINION COAL COMPANY LIMITEDITEMS CHARGED TO RESERVE FOR RENEWALS AND BETTERMENTS (Cont'd)

	<u>1 9 3 2</u>	<u>1 9 3 3</u>	<u>1 9 3 4</u>
<u>PIERS AND TUGS</u>			
<u>Items of a Capital Nature</u>			
<u>Other Items</u>			
<u>Repairs to</u>			
International Piers	\$ 4,911.32	\$ 4,775.04	\$13,404.34
Louisburg Piers-Freight		188.30	8,896.65
" " -Wharf			12,117.98

\$ 4,911.32 \$ 4,963.34 \$ 34,418.97

1 9 3 5 1 9 3 6 1 9 3 7

Items of a Capital NatureWash House -

International Pier \$ 14,821.15

Other ItemsRepairs to

International Piers \$15,000.00 \$18,423.88 \$34,058.44
 Louisburg Piers 15,244.60 2,125.05 25,626.67
 " " Freight
 Wharf 755.94

\$ 31,000.54 \$ 20,548.93 \$ 59,685.11

1 9 3 8 1 9 3 9 1 9 4 0

Items of a Capital NatureWash House -

International Piers \$ 115.06

Other ItemsRepairs to

International Piers \$12,631.55 \$26,985.04 \$29,215.99
 Louisburg Piers 2,691.56 5,410.92
 " " - Freight
 Wharf 7,645.79 118.76
 Repairs - Tug - Cruizer
 (Owned) 17,759.45

\$ 12,631.55 \$ 55,081.84 \$ 34,745.67

1 9 4 11 9 4 2Other ItemsRepairs to

International Piers \$32,427.07 \$ 26,689.52
 Louisburg Piers 48,278.48 14,752.43
 Repairs - Tug - Cruizer
 (Owned) 10,931.10 14,379.01
 Repairs - Tug - Ascupart
 (Owned) 13,455.28 12,925.96
 Repairs - Tug - Helena
 (Chartered) 44,373.13 14,172.21

\$ 149,465.06 \$ 82,919.13

ITEMS CHARGED TO RESERVE FOR RENEWALS AND BETTERMENTS (Cont'd)

<u>PIERS AND TUGS (Cont'd)</u>	<u>1 9 4 3</u>	<u>1 9 4 4</u>
<u>Other Items</u>		
Repairs to		
International Piers	\$24,415.62	\$39,023.39
Louisburg Piers	14,320.59	19,054.40
Repairs - Tug - Cruizer		
(Owned)	60,251.64	6,958.92
- Tug - Ascupart		
(Owned)	8,272.11	14,674.52
- Tug - Helena		
(Chartered)	9,056.86	
Barge - Allen 2		1,569.63
	<u>\$116,316.82</u>	<u>\$81,280.86</u>

SYDNEY AND LOUISBURG RAILWAY

	<u>1 9 3 7</u>	<u>1 9 4 0</u>	<u>1 9 4 1</u>
<u>Items of a Capital Nature</u>			
New Locomotives	\$37,227.43		\$47,421.37
Bertram Lathe	4,154.80		
Bridges			216.61
	<u>\$41,382.23</u>		<u>\$47,637.98</u>

<u>Other Items</u>			
Bunker Pocket		\$16,279.33	9,295.38
Locomotive Boilers			13,561.43
Trackage			11,808.79
		<u>\$16,279.33</u>	<u>\$34,665.60</u>

	<u>1 9 4 2</u>	<u>1 9 4 3</u>	<u>1 9 4 4</u>
<u>Items of a Capital Nature</u>			
New Locomotives	\$ 7,487.95		
Bridges	76,589.67		
	<u>\$84,077.62</u>		

<u>Other Items</u>			
Bunker Pocket	\$ 236.52		
Locomotive Boilers	21,943.89	\$18,532.93	\$18,463.61
Trackage	620.52		
Stations	10.69		462.00
	<u>\$22,811.62</u>	<u>\$18,532.93</u>	<u>\$18,925.61</u>

DOMINION COAL COMPANY LIMITEDITEMS CHARGED TO RESERVE FOR REPAIRS AND IMPROVEMENTS

<u>MISCELLANEOUS</u>	<u>1 9 3 2</u>	<u>1 9 3 3</u>	<u>1 9 3 4</u>	<u>1 9 3 5</u>
<u>Items of a Capital Nature</u>				
Auto Truck			\$3,824.00	
Lower Line-McAskill Brook				\$ 13,544.84
Radial and Power Saw -G.B.Shops				3,056.75
Diamond Drills				1,387.45
Coal Bridge - D.I. & S.Co.			106,410.63	
			<u>\$ 110,234.62</u>	<u>\$17,989.02</u>
<u>Other Items</u>				
Locomotive Repairs	\$32,580.84	\$1,839.53	\$ 3,615.95	
Splint Crusher Rolls		214.00		
	<u>\$32,580.84</u>	<u>\$2,053.53</u>	<u>\$ 3,615.95</u>	

<u>MISCELLANEOUS</u>	<u>1 9 3 6</u>	<u>1 9 3 7</u>	<u>1 9 3 8</u>
<u>Items of a Capital Nature</u>			
Tractor, Mullins Bank	\$178,047.36		
Boring Mill - Machine Shop		\$13,716.90	
Lathe - Glace Bay. Do.		3,913.27	
Spare K.V.A. Transformer		2,251.09	
Lower Line - McAskill Brook		6,168.78	
Boring Mill		1,321.00	
	<u>\$178,047.36</u>	<u>\$ 27,371.04</u>	

<u>MISCELLANEOUS</u>	<u>1 9 3 9</u>	<u>1 9 4 0</u>	<u>1 9 4 1</u>
<u>Items of a Capital Nature</u>			
Bridge Bank Extension		\$180,105.20	
Tractor - Mullins Bank		7,328.00	
Slack Bank Conveyor	\$ 11,879.77	11,326.30	
Slack Bank Tracks	5,277.44	2,999.25	
" " Storage Bin	2,816.09	7,177.62	
Boring Mill - Machine Shop		180.20	
Electric Hoist G.B.Shops		9,282.84	
	<u>19,973.30</u>	<u>218,399.41</u>	
<u>Other Items</u>			
Pipe Line Diversion	\$ 32.94		
Tracks	3,447.76		
Engineering Supervision	535.46		
	<u>\$ 4,016.16</u>		

<u>MISCELLANEOUS</u>	<u>1942</u>
<u>Items of a Capital Nature</u>	
Lower Line - McAskill Brook	<u>\$15,734.32</u>

CUMBERLAND RAILWAY AND COAL COMPANY

ITEMS OF A CAPITAL NATURE CHARGED TO RESERVE FOR RENEWALS AND
BETTERMENTS, FOR THE UNDERNOTED YEARS

	<u>1 9 3 2</u>	<u>1 9 3 3</u>	<u>1 9 3 4</u>
Electric Pump Development -	\$1,255.10	\$ 5,552.80	
No. 1 Seam	1,694.80	19,766.02	\$ 38,298.08
Tunnelling		48,072.46	5,445.31
Temporary Bankhead Tunnel between Nos. 1 and 2		19,001.15	
Synchronous Condenser No. 2 Mine			7,268.29
Warehouse Extension			3,300.00
Rebuilding 2 and 4 Bankhead and Rescreening Plant			12,846.09
Headway Hoist, No. 4 Slope			12,769.53
Nos. 2 and 4 Bankhead			14,701.68
			15,509.28
	<u>\$2,949.90</u>	<u>\$ 92,392.43</u>	<u>\$110,138.26</u>

	<u>1 9 3 5</u>	<u>1 9 3 6</u>	<u>1 9 3 7</u>
Tunnelling			\$ 23,444.62
Headway Hoist, No. 4 Slope	\$14,276.13	\$ 9,774.90	670.41
Nos. 2 and 4 Bankhead	18,799.77		
Equipment No. 1 Seam	10,183.23	453.44	1,431.57
Air Main	4,108.97	6,336.79	9,723.01
Coal Cutters, No. 1 Seam	17,486.35		
Two Slusher Haulages	3,632.55		
Prospecting	11,851.18	2,859.14	
Pumping No. 2 Mine		10,150.16	6,451.97
Belt Conveyor		935.85	
Diamond Drills			1,875.48
Fan			2,776.17
Motors			4,365.03
Shaker Conveyor Engines			1,325.24

<u>\$80,338.18</u>	<u>\$ 30,210.28</u>	<u>\$ 52,063.50</u>
<u>1 9 3 8</u>	<u>1 9 3 9</u>	<u>1 9 4 0</u>

Tunnelling	\$14,691.40		
Warehouse Extension	8,966.20		
Headway Hoist No. 4 Slope	1,487.13		
Equipment No. 1 Seam	33.44		
Air Main	426.91		\$ 1,392.59
Two Slusher Haulages	14,814.00		
Pumping No. 2 Mine	4,748.25		
Belt Conveyor	3,241.01		15,694.86
Hoisting Engine	1,150.00		
Shaker Conveyor Engines		\$ 1,893.35	2,062.84
Transformer	7,549.65		
Shaker Troughing	3,678.04		3,853.79
Electric Hoist			9,756.23

<u>\$ 60,786.03</u>	<u>\$ 1,893.35</u>	<u>\$ 32,760.31</u>
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CUMBERLAND RAILWAY AND COAL COMPANY (Cont'd)

	<u>1 9 4 1</u>	<u>1 9 4 2</u>	<u>1 9 4 3</u>	<u>1 9 4 4</u>
Air Main	\$ 3,848.74			
Shaker Conveyor				
Engines	817.21			
Shaker Troughing	5,511.44			
Electric Hoist	95,594.54			
Drum Shaft, No.				
2 Mine	5,224.27			
Car Puller -				
Parrsboro Pier	3,513.53			
Three Haulage En-				
gines, No. 4 Mine	11,937.17			
Longwall Equipment				
No. 4 Mine		\$ 5,608.10		
No. 1 Mine		5,226.36		
Electric Welder		993.03		
Spares for Bankhead				
Speed Reducers		4,793.95		
Two Conveyor Engines				
No. 4 Mine		1,605.16		
Twelve Sets of McCoa				
Breathing Apparatus		3,540.00		
450 H.P. Motor No. 2				
Relay Hoist		1,338.43	\$ 5,706.87	
Signal System No. 4 Mine			4,470.60	
9 x 12 Haulage Engine				
No. 4 Mine				\$29,869.93
Tunnel between Nos. 6 and				
7 Seams				8,594.38
Turnout Tunnel No. 2 Mine				2,631.49
One Gate End Loader				3,989.79
Portable Flight Conveyor				697.25
	<u>\$126,440.90</u>	<u>\$23,105.03</u>	<u>\$10,177.47</u>	<u>\$45,782.84</u>

DOMINION COAL COMPANY LIMITED

STATEMENT SHOWING EXPENDITURE IN EXCESS OF \$1,000.00
PER UNIT FOR NEW OR USED MACHINERY AND EQUIPMENT INCLUD-
ING INSTALLATION COST OF LABOR AND MATERIAL FOR UNDER-
GROUND OR SURFACE USE IN MINING OR AUXILIARY SERVICE

YEAR - 1943

<u>Colliery or Department</u>	<u>Description</u>	<u>Amount</u>	
<u>MACHINE SHOP</u>			
20	2 8 $\frac{1}{4}$ x 10 Engines	\$ 5,434.08	Renewal
2	Alteration to Electric Haulage	3,729.47	Alteration
2	Piston Rods & Rings for 8 $\frac{1}{4}$ x 10 Engines	1,557.28	Repair
20	Repair Telescopic Loader	2,463.69	Repair
4	Repair Coal Cage	1,972.34	Repair
12	Repair 1 4 Stage McDoug- all Pump	1,152.71	Repair
16	3 Spotting Engines 8 $\frac{1}{4}$ x10	3,902.30	Extension
16	2 10x12 Single Drum Engines	6,170.66	Renewal
16	Repair 8 $\frac{1}{4}$ x10 Rand Engine	1,394.44	Repair
24	Repair 400 gallon Centri- fugal Pump	2,101.88	Repair
<u>GENERAL WAREHOUSE</u>			
16	1 400 H.P. Motor	4,836.00	Spare
1-B	1650 ft. Conveyor Belt	5,431.31	Renewal
20	1 350 H. P. Motor	5,197.53	Renewal
24	1 150 H. P. Liquid Con- troller	1,572.97	Renewal
18	50 Pit Tubs	7,711.67	Renewal
1-B	1650 ft. Conveyor Belt	5,431.31	Renewal
1-B	1650 ft. Conveyor Belt	5,431.31	Renewal
25	Pit Tubs	22,702.07	Spare
12	Brakes for Coal Hoist	1,946.98	Safety Device
16	150 H.P. Control Equipment	1,587.97	Renewal
12	150 H.P. Control Equipment	1,587.97	Renewal
1-B	1000 ft. 4/0 Steel Armour- ed Cable installed in Shaft	2,243.16	Renewal
1-B	1000 ft. 4/0 Steel Armour- ed Cable installed in Level	1,733.16	Renewal
2	1 250 K.V.A. Transformer	3,460.00	Spare
4	1 Liquid Rheostat Gear for 150 H.P. Motor	1,950.35	Spare

DOMINION COAL COMPANY LIMITED

STATEMENT SHOWING EXPENDITURE IN EXCESS OF \$1000.00
PER UNIT FOR NEW OR USED MACHINERY AND EQUIPMENT
INCLUDING INSTALLATION COST OF LABOUR AND MATERIAL
FOR UNDERGROUND OR SURFACE USE IN MINING OR AUXILIARY
SERVICE.

YEAR - 1944

<u>Colliery or Department</u>	<u>Description</u>	<u>Amount</u>	
<u>MACHINE SHOP</u>			
No. 16	2 - 10x12 Rand Engines	\$3,483.75	Renewal
4	Repair Coal Cage	1,553.34	Repair
16	Rebuild 8½x10 Rand Engine	2,062.98	Repair
4	1 - 10x12 Rand Engine	4,274.63	Renewal
20	1 - 10x12 Dominion Coal Engine	4,694.23	Extension
16	1 Scraper Loader	1,274.43	Renewal
2	Repair Flory Engine	1,590.91	Repair
1B	Repair Coal Cage	3,754.03	Repair
2	Repair parts for 15 x 16 Rand Engine	1,220.12	Repair
2	Repair Hoisting Tank	3,245.32	Repair
26	2 - 10x12 Engines	2,755.57	Extension
16	Make 1 pulley for fan	1,075.78	Alteration
4	Make 7 fillers and 6 rings for 7' Drum	2,558.29	Safety Alt.
24	Make 1 - 5 stage pump	2,487.20	Extension
25	6x8 Jenkes Engine fitted for Electricity	1,616.94	Alteration
4	Repair Coal Cage	1,647.82	Repair
20	1 - 10x12 Rand Engine	4,324.63	Extension
12	Make 10x12 Engine	4,694.23	Renewal
<u>WAREHOUSE</u>			
Elect. Stores	1 C.R. 7441 Reverser M.L.	1,554.20	Spare
" "	1 - 175 H.P. Motor 2nd Hand	1,300.00	Spare
2 & 16	2 Type F. Mining Pillars	2,350.00	Renewal
Elect. Stores	1 - 150 H.P. Motor	2,914.51	Spare
No. 18	1000' Steel Armoured Cable	1,700.60	Extension
No. 1B	Steel Armoured Cable	2,625.00	Extension
Elect. Stores	All Stator Winding Material	1,952.38	Renewal
" "	Type F. Mining Pillar	1,185.00	Spare
1-B	1000 4/0 Cable	2,070.57	Renewal
Const. Dept.	1 Concrete Mixer	1,919.60	Renewal
Elect. Stores	1 - 225 H.P. Motor & Coils 2nd Hand	1,006.88	Spare
No. 24	1000' P.I.L.C. Cable	1,327.00	Extension
25	1000' P.I.L.C. Cable	1,327.00	Extension
Elect. Stores	1 Type "F" Mining Pillar	1,148.00	Spare

MR. MORRISON that proceeded to read Exhibit 206, as follows:

ACADIA COAL COMPANY LIMITED

CORPORATE HISTORY

The Acadia Coal Company Limited was incorporated under The Companies Act of Nova Scotia in 1865.

The Capital Stock was \$6,000,000.00, which was revised in May, 1913, by an exchange of shares. After the exchange, the authorized and issued capital of the company was:-

	<u>Authorized</u>	<u>Issued</u>
First Preferred 6% Cumulative	\$2,000,000.00	\$2,000,000.00
Second Preferred 6% Non-cumulative	1,000,000.00	1,000,000.00
Common	<u>2,000,000.00</u>	<u>1,846,100.00</u>
	<u>\$5,000,000.00</u>	<u>\$4,846,100.00</u>

The six per cent second preferred and the common shares were paid in full when issued. On the six percent second preferred, ninety-five per cent was paid when issued. In 1942, the company made a call on the holders for the balance of five per cent, or \$100,000.00, which was paid.

In 1919, the Nova Scotia Steel and Coal Company Limited acquired control of the company by the purchase of practically the whole of the outstanding shares at the following cost:-

20,000 Shares, First Preferred 6% Cumulative (Par subject to call of 5%)	\$1,900,000.00
9,998 Shares, Second Preferred 6% Non-cumulative) by the issue of \$55.00 in debenture stock) of Nova Scotia for each \$100.00 par value) Acadia)	974,734.95
17,509½ Shares of Common	<u>\$2,874,734.95</u>

BY THE CHAIRMAN - The Common Stock of Acadia was held at that time by the public, was it not?

A. I have no information before me on that.

BY MR. FORSYTHE - I think that is so. An offer was made. As I recall at the time of the reorganization of the Scotia Company I made an investigation of that and I found there were a very few

shares outstanding. Eighteen hundred and forty-six thousand issued, and we had seventeen hundred and fifty thousand out of that.

BY THE CHAIRMAN - I am talking of when Nova Scotia Steel & Coal got the majority of shares in Acadia.

BY MR. FORSYTHE - I think they acquired the common stock then. There was some arrangement made with public holders and they got in all the stock with the exception of these few odd shares. I have the figures somewhere, but I have not got them here.

BY MR. MORRISON - We have no definite information before us.

MR. MORRISON continues Report

The Acadia Company operates three collieries in Pictou County, namely Allan, Albion and Acadia No. 7.

Submitted hereunder are comments on, and summaries of the attached statements.

(That is the attached statements referred to in Exhibit "B" for identification).

BALANCE SHEETS

Statement No. 1 - Detailed Balance Sheet, 31st December 1944.

No. 2 - Statement of Assets - 1930 to 1944.

No. 3 - Statement of Liabilities - 1930 to 1944.

A summary of the Balance Sheets as at selected dates is as follows:-

	<u>Assets</u>			
Properties	\$5,428,706.24	\$5,410,956.51	\$5,384,568.98	\$5,302,905.45
Less Reserve for Depreciation	1,687,481.41	2,322,130.29	2,654,275.29	3,003,070.98
	\$3,741,224.83	\$3,088,826.22	\$2,730,293.69	\$2,299,834.47
Current Assets	917,458.35	182,254.38	316,470.35	424,437.56
Agreements for Sale	75.00	5,635.45	11,131.64	85,084.53
Due from other Companies	951,663.05	5,935.81	39,303.73	49,383.84
Deferred Charges	103,086.70	26,591.55	8,683.19	7,083.80
Claims				171,490.08
	<u>\$5,713,507.93</u>	<u>\$3,309,243.41</u>	<u>\$3,105,882.60</u>	<u>\$3,037,314.28</u>

	<u>Liabilities</u>			
Capital -				
6% Cum. Prof.				
Part	\$1,900,000.00	\$1,900,000.00	\$1,900,000.00	\$2,000,000.00
6% Non-Cum.				
Sec. Prof.	1,000,000.00	1,000,000.00	1,000,000.00	1,000,000.00
Ordinary	<u>1,846,100.00</u>	<u>1,846,100.00</u>	<u>1,846,100.00</u>	<u>1,846,100.00</u>
	\$4,746,100.00	\$4,746,100.00	\$4,746,100.00	\$4,846,100.00
Surplus or				
Deficit	893,520.26	-1,755,192.68	-2,110,826.63	-2,253,007.94
Mortgage Bonds,				
4%			105,000.00	85,000.00
Current Lia-				
bilities	46,470.48	226,159.63	142,068.44	113,140.75
Due to Other				
Companies		32,246.51		7,334.90
Reserves	<u>25,417.19</u>	<u>59,929.95</u>	<u>223,540.79</u>	<u>238,746.57</u>
	<u>\$5,713,507.93</u>	<u>\$3,309,243.41</u>	<u>\$3,105,882.60</u>	<u>\$3,037,314.26</u>

In the year 1933 the Nova Scotia Steel and Coal Company Limited went into receivership and a balance due from that company, amounting to \$1,703,410.81 was written-off. Under the re-organization plan of that company, in 1938, an adjustment was made of this write-off, reducing it by \$526,846.48, making the net loss to Acadia \$1,176,564.33.

(It will be recalled, Sir, that in the previous report the details of that loss were submitted.)

Properties

Schedules "B" - 1 and "B" - 2 detail the fixed assets and depreciation reserve, showing the value of the depreciable assets which, at 31st December, 1944, was:-

	<u>Value</u>	<u>Depreciation</u>	<u>Net</u>
Plant Additions	\$34,827.67	\$6,697.39	\$28,130.28
Sidewalks	3,794.80	-	3,794.80

With the exception of the plant additions and sidewalks mentioned above, all the other depreciable assets have been dully provided for by depreciation charges.

If the non-depreciable assets - coal areas \$2,799,096.94 - there has been provided against this item during the years 1942, 1943 and 1944, depletion at ten cents per ton taken upon books of \$104,783.67; depreciation in excess of one hundred percent on

assets - \$306,117.88, arising through the providing of a fixed annual depreciation of \$120,000.00, and credits from buildings sold after being fully depreciated, of \$120,286.00, or total depletion of \$531,187.55, which leaves a net book value of \$2,267,909.39.

Claims

The item "Claims" on the 1944 Balance Sheet represents claims made against the Emergency Coal Production Board for the years 1943 and 1944 for depletion and standard profits, totalling \$47,867.57. The balance, representing the excess of increased wages paid under Order 2 N.26 over the amount realized from increased selling prices, Order A.1054, recoverable or claimable from coal sales, associated companies or The Emergency Coal Production Board. Acadia received the sum of \$61,092.21 from Old Sydney, representing an over-recovery by that company under Order A.1054.

Deficit and Current Position

During the fifteen year period, dividends were only paid on the Six Percent Cumulative Preferred Stock, amounting to \$114,000.00, in each of the years 1930 and 1931. Since then no payments have been made to the parent company.

Comparing the position of the Company as at 31st December, 1930 and 1944, it will be noted that a deficit has been incurred over that period of \$3,146,528.20, of which \$1,176,564.33 arises through the cancellation of the debt due from Nova Scotia Steel. The Company has financed its operations through the use of its net current assets, which decreased from \$868,987.87 in 1930 to \$311,296.81 in 1944, or a reduction of \$557,691.06. The other factor is that depreciation and depletion, amounting to \$1,583,444.57, charged to operations and reserves totalling \$213,329.38, are non-cash items. These reserves have not been earned by the company's operations.

PROFIT AND LOSS ACCOUNTS - Statements Nos. 4, 5 and 6

Statement No. 4 - Profit and Loss - 1930 to 1935

No. 5 - Do. - 1936 to 1939

No. 6 - Do. - 1940 to 1944.

The results of the operations of the company over the period are tabulated below; the minus sign indicates losses:-

		<u>Amount</u>	<u>Per Ton</u>
Company Operation	1930	\$ 87,418.77	\$.197
	1931	-15,725.63	-.035
	1932	-180,174.38	-.579
Receivers Operation	1933	-359,568.20	-1.707
	1934	11,543.10	.040
	1935	-287,377.02	-.816
Average 1930 to 1935		<u><u>-\$ 134,884.13</u></u>	<u><u>-\$.393</u></u>
Receivers Operation	1936	-\$ 302,405.35	-\$.815
	1937	- 241,252.81	- .554
	1938	- 200,910.69	- .574
Company Operation	1939	<u>- 137,911.58</u>	<u>- .014</u>
Average 1936 to 1939		<u><u>-\$ 219,129.85</u></u>	<u><u>-\$.560</u></u>
Company Operation	1940	-\$ 94,710.35	-\$.203
	1941	- 62,470.96	- .132
(Including	(1942	- 177,847.11	- .457
(subsides received	(1943	187,847.11	.541
(and claimed	(1944	<u>5,000.00</u>	<u>.016</u>
Average 1940 to 1944		<u><u>-\$ 29,628.47</u></u>	<u><u>-\$.074</u></u>

Included in the above results is depreciation and depletion at a fixed annual amount of \$120,000.00, from 1930 to 1941, with the exception of 1933, when the sum of \$154,648.88 was provided. From 1942 to 1944, depletion was charged at ten cents per ton, plus depreciation on the remaining depreciable assets at five per cent per annum.

SALES SUMMARY - Schedule "S" - 1

The percentage of sales is as follows:

	<u>Public</u>	<u>Associated Companies</u>	<u>Company Consumption, etc.</u>
1930	81.546%	8.143%	10.311%
1931	81.155	5.911	12.934
1932	78.073	3.938	17.989
1933	68.722	5.734	25.544
1934	72.887	3.743	23.370
1935	72.609	5.768	21.623

	<u>Public</u>	<u>Associated Companies</u>	<u>Company Consumption etc.</u>
1936	73.376%	4.784%	21.840%
1937	70.836	7.675	21.489
1938	67.891	6.873	25.236
1939	71.156	6.798	22.046
1940	72.959	8.204	18.837
1941	67.816	14.368	17.816
1942	62.182	20.881	16.937
1943	60.568	20.481	18.951
1944	60.278	16.938	22.784

SUMMARY OF SALES TO THE PUBLIC -
Schedules "S" - 2 and "S" - 3

Schedule "S" - 3 sets out in detail the price received at the mines for all coal sold to the public, and is further segregated by grades.

Using representative years, the following variations are shown in the net price received:-

		<u>High</u>	<u>Low</u>
<u>Grade - Mine Run</u>	1930	\$6.872	\$4.164
	1933	6.139	4.346
	1936	6.079	4.489
	1939	5.866	4.245
	1942	6.878	5.808
	1944	7.926	6.849
<u>Grade - Slack</u>	1930	\$4.173	\$3.613
	1933	4.027	3.805
	1936	3.871	3.608
	1939	4.032	3.883
	1942	4.712	4.429
	1944	6.010	5.916
<u>Average Price Received - All Grades</u>	1930	5.496	
	1933	5.011	
	1936	4.705	
	1939	4.704	
	1942	5.955	
	1944	7.232	

SALES TO ASSOCIATED COMPANIES -
Schedules "S" - 4 to 7.

Per ton value of sales to associated companies, as compared with public sales, are tabulated herunder - average all grades:-

	<u>Nova Scotia Steel</u>	<u>Trenton Steel</u>	<u>Eastern Car</u>	<u>Dominion Iron and Steel</u>	<u>Public</u>
1930	\$4.730		\$4.563	\$3.968	\$5.496
1933	4.757		4.590		5.011
1936	4.742		4.581		4.705
1939		\$4.723	4.600		4.704
1942		5.224	4.468		5.955
1944		6.339	6.013		7.232

BY MR. FRAWLEY - That is using the average for all grades?

A. Yes.

MR. MORRISON continues Report

The loss to Acadia on coal sold to associated companies based on mining cost, is as follows:-

1930 to 1941	Nova Scotia Steel	\$ 65,236.96	
	Trenton Steel	290.62	
	Eastern Car	55,578.40	
	Dominion Iron and Steel	9,487.84	\$130,593.82
1942 to 1944	Trenton Steel	224,029.10	
	Eastern Car	295,926.53	519,955.63
			<u>\$650,549.45</u>

BY MR. MORRISON - I would like to say there that when we refer to a loss on these sales, we refer to it as a comparison between the price received and the mining cost. There was no misunderstanding as to what that term meant in our Reports.

BY THE CHAIRMAN - Does that include the cost of coal to the employees of these various companies?

A. The total cost would include part of that as a cost.

B. As I understand it in that section up there they give the workmen of the Steel Companies there the same price on coal as to their coal miners.

A. That is relating to employees of the Steel Company? I have no knowledge of that.

MR. MORRISON continues Report.

COMPANY CONSUMPTION, ETC. -
Schedules "S" - 8, 9 and 11

Represents values placed on coal used in company operations and expense included in mining cost.

SALES TO EMPLOYEES - Schedules "S" - 10 and 10(A)

Entries are made charging mining cost and crediting

employees' sales with a certain amount annually, as shown on Schedule "S" - 10(A) and which also shows that the company sustained losses ranging from \$20,000.00 to \$84,000.00 annually on coal sold to employees. The total loss from sales to employees over the fifteen year period, as shown by Schedule "S" - 10(A), amounted to \$477,299.27.

SALES COSTS - Schedule "S" - 13

The costs per ton are as follows:-

1932	\$.108	1936	\$.410	1940	\$.689
1933	.159	1937	.377	1941	.143
1934	.378	1938	.340	1942	.098
1935	.357	1939	.556	1943	.148
				1944	.139

The drop in expense in 1941 and subsequent is occasioned by the greater use of the company railway, thereby eliminating ocean freight, marine insurance and a decrease in the use of other railroads' facilities.

BY MR. FORSYTHE - When you speak of the greater use of the company railway, is that not really a question of not so much the use of the company railway as the delivery to the Railways at Stellarton. It means a question of distinction and distance, I think.

BY MR. MORRISON - That is a factor always in variation. We would have to analyze the statement to come to any other conclusion, but it is really not a material point, but just an explanation of one of the reasons for the drop.

MR. MORRISON continues Report

MINING COSTS

Detailed Mining Cost Analysis -

1930 to 1935	-	Schedule "M"	- 1.
1936 to 1939	-	"	"M" - 2.
1940 to 1944	-	"	"M" - 3.

Including depreciation at twenty cents per ton and all charges as made by the company, the cost per ton is shown as follows:-

<u>Year</u>	<u>Production Tons</u>	<u>Cost</u>
1930	452,459	\$ 5.300
1931	446,984	5.188
1932	314,128	5.515
1933	208,181	5.604
1934	287,846	5.160
1935	350,287	5.297
Average	<u>343,314</u>	<u>\$ 5.345</u>
1936	373,642	\$ 5.254
1937	433,539	5.066
1938	349,290	5.252
1939	409,833	4.626
Average	<u>391,576</u>	<u>\$ 5.037</u>
1940	474,287	\$ 4.722
1941	469,561	5.129
1942	386,144	6.295
1943	346,015	7.705
1944	315,678	10.353
Average	<u>398,336</u>	<u>\$ 6.536</u>

The total cost per ton by collieries, is as undernoted.

Schedule "M" - 4 sets out the details:-

	<u>Allan</u>		<u>Albion</u>		<u>Acadia 3</u>		<u>Acadia 7</u>	
	<u>Production</u>		<u>Production</u>		<u>Production</u>		<u>Production</u>	
	<u>Tons</u>	<u>Cost</u>	<u>Tons</u>	<u>Cost</u>	<u>Tons</u>	<u>Cost</u>	<u>Tons</u>	<u>Cost</u>
1936	144,573	\$5.383	159,454	\$5.417	61,065	\$4.642		
1939	166,547	4.790	169,339	4.938			73,393	\$5.497
1940	166,411	5.464	204,054	4.780			94,012	3.768
1941	160,897	5.736	211,179	5.116			97,485	4.154
1942	112,666	8.081	185,752	5.942			87,726	4.749
1943	108,861	9.491	180,483	6.875			56,671	6.921
1944	111,694	11.534	165,876	9.625			38,108	10.060

In reviewing the above costs* for the year 1941 onwards, consideration must be given to the assistance received from the Federal Government in respect of cost of living bonus and levelling-up of wages, which are shown on the Profit and Loss Account.

BY MR. MORRISON - Then there is a tabulation showing original cost with adjustments and bringing out the adjusted costs for those years.

MR. MORRISON continues Report

	<u>1941</u>	<u>1942</u>	<u>1943</u>	<u>1944</u>
Cost, as shown above	₹ 5.129	₹ 6.295	₹ 7.705	₹10,353.
Retroactive Wages			.182	.192
Cost of Living Bonus received		- .205	- .301	- .058
Levelling-up of Wages			- 1.042	- .345
Excess of Wages paid under Order 2 N.26 over amount realized for increased selling prices				- .585
	<u>₹ 5.129</u>	<u>₹ 6.090</u>	<u>₹ 6.544</u>	<u>₹ 9.557</u>

In addition to the above assistance, the Dominion Government has paid, or has been requested to pay, the following amounts which adjust the profits in each of the years 1942, 1943 and 1944 to the standard profit of \$5,000.00:-

1942	\$50,000.00
1942 and 1943	495,151.27
1944	982,638.92

BY MR. MORRISON - Those first two figures really should be combined as the total of the two years there, which would be \$545,151.27.

MR. MORRISON continues Report

For the year 1944, an additional sum has been received, or is claimed, amounting to \$184,714.72, in respect of the excess of wages over increased selling prices under Order 2 N.26.

BY MR. FRAWLEY - When you say "the Government has been requested to pay", that is under the provisions of the Emergency Fuel Production Board regulations?

1. Or under these other Orders I have mentioned.

MR. MORRISON continues Report

Miscellaneous Charges in Mining Costs - Schedule	"M"	- 5.
Expenditure on Maintenance of Real Estate -	"	"M" - 6.
Sundry Information re Salaries -		
General Staff and Superintendence -	"	"M" - 7.
Work Orders Charged to Operations -	"	"M" - 8.
Mine Cars Purchased from Eastern		
Car Company -	"	"M" - 9.
Summary of Mining Costs, with		
Percentages -	"	"M" -10.

The above schedules elaborate some of the items included in mining cost.

Schedule "M" - 8 shows items charged to operation on work orders. Those of a capital nature are as follows:-

	<u>1942</u>	<u>1943</u>	<u>1944</u>
Allan			
Radial Undercutters		\$2,176.12	\$4,151.43
Jackhammers		1,261.41	421.06
Detaching Hook			4,931.69
Albion			
Conveyor Troughing		3,013.50	
Power Plant			
Circulating Pump	\$5,700.02		
	<u>\$5,700.02</u>	<u>\$ 6,451.03</u>	<u>\$9,504.18</u>

Shown on Schedule "M" - 10 is a summary of mining costs, with percentages of the various items of cost. The averages are as follows:-

	<u>1930 - 1935</u>		<u>1936 to 1939</u>		<u>1940 to 1944</u>	
	Percent-		Percent-		Percent-	
	<u>Cost</u>	<u>age</u>	<u>Cost</u>	<u>age</u>	<u>Cost</u>	<u>age</u>
Material	\$3.110	58.185%	\$2.933	58.229%	\$4.053	62.011%
Power	.533	9.972	.510	10.125	.638	9.761
Removals and	.530	9.916	.544	10.800	.545	8.338
Betterments	.044	.823	.067	1.320	.061	.933
Depreciation	.201	3.761	.200	3.971	.199	3.045
General Charges	.901	16,857	.783	15.545	1.040	15.912
Rescreening	.026	.486				
Total	<u>\$5.345</u>	<u>100. %</u>	<u>\$5.037</u>	<u>100. %</u>	<u>\$6.536</u>	<u>100. %</u>

The labor cost varies from a low of 54.922% in 1934 to a high of 65.227% in 1944, of the total, with an overall average of 59.4%.

RESERVES

- Schedules "R" - 1 - Summary of Operating and Contingent Reserves
 "R" - 2 - Fire Loss and Explosion.
 "R" - 3 - Contingencies.
 "R" - 4 - Tenements.
 "R" - 5 - Renewals and Betterments
 "R" - 6 - Loss on Coal Cargoes.
 "R" - 7 - Claims
 "R" - 8 - Coke Sales

The operating and contingency reserves, Schedule "R" - 1, have increased, from 1st January, 1934 to the end of 1944, by \$238,746.57, in the years shown by the following tabulation. Prior to 1934, these reserves were reversed to a nil balance in the books.

1934	\$ 39,082.55
1935	20,847.40
1936	50,714.87
1937	93,289.97
1938	- 5,635.88
1939	25,241.88
1940	32,175.09
1941	- 4,468.21
1942	-12,501.10
	<u>238,746.57</u>

Reserve for Fire Loss and Explosion -
Schedule "R" - 2

In the years 1930, 1931 and 1932, the company suffered a loss of \$185,915.56, which was charged to this reserve, and which was written-off over a period of seven years. In 1936 and 1937, the reserve was built up to \$43,969.77 from profits, and has remained at practically the same balance since, there being small charges in the years 1937 to 1940.

Contingency Reserve - Schedule "R" - 3.

This reserve has been built up by charges to operations, from 1939 to 1942; to a balance of \$71,668.08, with small charges in 1940 and 1942.

Renewals and Betterments Reserve -
Schedule "R" - 5

Included in the charges to this reserve are items which appear to be of a capital nature, and are shown in detail on Schedule "R" - 5(1). A summary of these charges is as follows:-

<u>Year</u>	<u>Amount</u>
1930	\$ 11,685.93
1931	6,325.93
1932	4,342.34
1936	7,760.84
1937	3,644.67
1938	2,400.00
1939	44,170.41
1942	74,090.53
1943	1,931.18
	<u>\$ 156,351.83</u>

While it is recognized that the operations of the above years probably received the benefit of similar items charged in the years prior to 1930, yet it is evident from the above tabulation

that in a number of years between 1930 and 1944, no charges were made to this particular reserve. As a consequence, mining costs fluctuate because of the incidence of the expenditure, rather than on the more proper basis of an equitable distribution of such expenditures.

The charging of such items by the company to these reserves, suggests that they are of a different category to ordinary operating expenses. We are, therefore, placing before your Commission, a detailed analysis of these expenditures.

Pit Tubs - Schedule "R" - 5(1.)

A summary of the charges for pit tubs is shown hereunder. It will be noted from this statement that there is a considerable variation in prices according to size, class of car, etc. and the annual costs also show considerable fluctuation, varying from nil in six of the years to as high as \$33,015.00 in 1940.

A spreading over of such charges would, in our opinion, reflect a more accurate costing, but pending consideration of the problem by your Commission, we have not adjusted the mining costs.

	<u>Number of Tubs</u>	<u>Cost of Pit Tubs</u>
1930 to 1934		Nil
1935	200	\$23,140.30
1936	100	13,858.12
1937		Nil
1938	150	21,924.86
1939	50	9,456.63
1940	275	33,015.50
1941	25	9,170.62
1942	25	4,984.96
1943	25	9,203.10
1944		Nil
	<u>850</u>	<u>\$124,734.09</u>

Reserve for Bad Debts - Schedule "R" - 9.

Written off during the fifteen years from 1930 to 1944 are the following:-

Employees - Rent	\$ 39,213.65
- Coal	7,168.58
- Rent and Coal to Soldiers' Dependents, as recommended by the McTague Commission	6,430.80
- Rent and Coal Balances, as at 31st July, 1938, as recommended by the McTague Commission	<u>50,095.06</u>
	\$ 102,908.09

Balance brought forward..\$102,908.09

Trade Accounts

38,613.48

Total written off

\$ 141,521.57

BY THE CHAIRMAN - When were these Trade Accounts for, previous to the war?

1. The Trade Accounts, Sir?

2. Yes?

1. They run from 1930 to 1945, but it is during the fifteen year period. The details can be obtained from the Schedule.

MR. MORRISON continues Report

At the commencement of the 1930 period, the reserve had a credit balance of \$30,294.17. The details of the provisions which were charged to operations are shown on Schedule "R" - 9, while the details of the write-off are enumerated above. The balance of the reserve at 31st December, 1944 was \$10,408.75, and was provision against the non-collection of accounts totalling \$109,443.68, or approximately ten per cent.

PROFIT AND LOSS SUMMARY

A summary of the Profit and Loss as shown by the Company's books is as follows:-

<u>Year</u>	<u>Net Sales</u>	<u>Sundry Revenue less Interest etc.</u>	<u>Mining Cost</u>	<u>Depreciation and Depletion Adjustment</u>
1930	\$2,434,242.58	\$ 97,885.56	\$2,397,921.31	\$ 29,508.20
1931	2,264,325.53	102,679.59	2,319,118.27	30,603.20
1932	1,536,052.86	106,197.63	1,732,485.19	57,174.40
1933	962,703.78	4,707.61	1,167,951.67	112,962.68
1934	1,324,926.93	-9,307.53	1,485,155.58	62,430.80
1935	1,579,421.70	11,055.40	1,855,295.28	49,942.60
1936	1,657,902.05	14,802.36	1,962,990.41	45,271.60
1937	1,947,447.09	-1,646.24	2,196,519.34	33,292.20
1938	1,578,037.80	-15,685.96	1,834,480.38	50,142.00
1939	1,819,678.79	-17,592.55	1,896,004.41	38,032.40
1940	2,173,608.65	- 7,758.68	2,239,416.73	27,104.60
1941	2,376,152.35	- 4,244.25	2,408,291.26	26,087.80
1942	2,082,271.85	3,783.88	2,430,900.28	-37,479.11
1943	1,896,926.85	25,627.13	2,666,250.10	-33,466.18
1944	2,001,065.61	8,154.96	3,268,252.20	-29,826.42

PROFIT & LOSS SUMMARY (continued)

Year	Provincial or Federal Government Assistance Received or Claimed	Retroactive Wages	Net Profit or Loss
1930			\$ 104,698.63
1931			17,283.65
1932			-147,409.10
1933	\$ 5,344.87		-308,158.09
1934	43,623.88		-188,343.10
1935	27,383.76		-287,377.02
1936	33,152.25		-302,405.35
1937	42,757.88		-241,252.81
1938	121,359.85		-200,910.69
1939			-131,950.57
1940			-100,671.36
1941			- 62,470.96
1942	312,365.44		5,000.00
1943	778,239.33	\$ 63,009.39	5,000.00
1944	1,294,760.06	60,554.85	<u>5,000.00</u>
Net Losses			- \$1,833,966.77

Note:- 1. Federal assistance, 1943 and 1943, adjusted to year in which it is applicable.

2. Assistance - 1933 to 1938 - Province of Nova Scotia
(Details - Statements Nos. 4 to 6)
- 1942 to 1944 - Federal Government
(Details - Statements Nos. 4 to 6)

Depreciation and Depletion

Depreciation has been charged to operations in fixed annual amounts up to 1942, resulting in over-depreciating the depreciable assets by \$306,117.88. At that date (1942) this amount was regarded by the Company as depletion. A further amount of \$120,286.00, representing the profit on sale of buildings, was also regarded as a provision for depletion, making a total depletion reserve as at 31st December, 1941, of \$426,403.88.

Applying this reserve to the production for the period 1930 to 1942, the per ton provision for depletion equals 9.35 cents per ton on a production of 4,560,018 tons. Since 1942, the Company has put through a provision of ten cents per ton annually.

As mentioned previously in this report, neither of

these reserves has been earned over the entire period.

The subject of depreciation and depletion applies to all companies under consideration and will be dealt with in a separate report. (And that has been done in our first report, Sir.)

While the foregoing tabulation (Profit and Loss Summary/ summarizes the adjusted Profit and Loss Accounts for the years 1930 to 1944, consideration has still to be given to the following items which are detailed hereunder, and which have been charged to operations:-

Capital or Deferred Expenditures -		
(a) Miscellaneous Work Orders	\$ 21,655	
(b) Reserves	156,352	
(c) Pit Tubs	<u>124,734</u>	\$302,741
Increase in Reserve		<u>238,747</u>
		<u>\$ 541,488</u>
Losses on Sales:-		
To Affiliated Companies	\$650,549	
To Employees	<u>477,299</u>	<u>\$1,127,848</u>

When considering the problem of allocation of expenditures as between capital and operating, it is noted that the amounts charged to capital during the period 1930 to 1944, as shown by Schedule "B" - 3, totalled \$178,266.02.

MINERS' EARNINGS, ETC.

Statement of Production, in Tons, per Man - Schedule "E" - 1

This Schedule shows the production, in tons, per man, of the labour employed, and the peaks are shown below:-

Surface Labor	High	7.49 Tons	1931
	Low	4.73 "	1933
Underground Labor	High	3.25 "	1931
	Low	1.77 "	1944
Mining Labor	High	6.53 "	1935
	Low	3.99 "	1936
Total Labor	High	1.55 "	1931
	Low	1.03 "	1944

Shifts Worked - Schedule "E" - 2

Surface Shifts	High	69,782	1940
	Low	44,063	1933
Underground Shifts	High	177,601	1944
	Low	81,628	1933
Mining Shifts	High	108,236	1937
	Low	31,921	1933
Total	High	330,697	1940
	Low	157,612	1933

Average Earnings - Representative Years -
Schedule "E" - 3.

A summary of the above schedule is as follows:-

	<u>Datal Men</u>		<u>Mining Contracts</u>		<u>Total All Classes</u>	
	<u>Daily</u>	<u>Annual</u>	<u>Daily</u>	<u>Annual</u>	<u>Daily</u>	<u>Annual</u>
1931	\$4.02	\$ 974.50	\$6.52	\$1,418.73	\$4.76	\$1,116.77
1936	3.29	862.34	5.10	1,201.87	3.75	952.10
1939	3.29	836.60	5.94	1,188.72	3.88	928.16
1940	3.28	992.19	5.96	1,578.61	3.93	1,149.10
1941	3.75	1,102.28	6.66	1,781.81	4.39	1,261.73
1942	4.37	1,271.93	7.56	2,115.32	5.01	1,447.03
1943	5.25	1,618.22	9.80	2,625.90	6.04	1,815.42
1944	6.15	1,901.23	10.22	2,817.27	6.86	2,076.14

Comparison of Annual Output

With Man-shifts 1930 - 1944 (000 omitted)

Year	Tons Output	<u>M a n - S h i f t s</u>				Ton Per Man	Labor Costs Per Ton
		<u>Surface</u>	<u>Underground</u>	<u>Mining</u>	<u>Total</u>		
1930	452	64	146	101	311	1.44	\$ 3.253
1931	447	59	136	90	285	1.55	3.118
1932	314	45	124	67	236	1.33	3.281
1933	208	44	81	32	157	1.33	3.157
1934	288	45	108	69	222	1.30	2.834
1935	350	54	137	85	276	1.27	2.957
1936	374	54	147	94	295	1.27	3.043
1937	433	63	153	108	324	1.34	2.981
1938	349	55	121	82	258	1.35	3.003
1939	409	57	132	86	275	1.49	2.722
1940	474	70	165	96	331	1.43	2.825
1941	469	68	171	90	329	1.43	3.076
1942	386	64	159	72	295	1.31	3.769
1943	346	64	156	63	283	1.22	4.907
1944	316	65	177	63	305	1.03	6.753

- - - - -

From the above summary, it will be seen that for

approximately the same tonnage output in 1932 and 1944 (314,000 and 316,000 tons), the man-shifts necessary were greater by 69,000 shifts as follows:-

Increased Shifts - Surface Labor	--	20,000 shifts
- Underground "	--	<u>53,000 shifts</u>
- <u>Total</u>	--	73,000 shifts
Decreased Shifts - Mining Labor	--	<u>4,000 shifts</u>
Net Increased Shifts	--	<u><u>69,000</u></u>

The operating loss for 1932 - \$180,174.38

The operating loss for 1944 (Before
subsidy) - \$977,638.92

BY MR. MORRISON - Now in that connection, Sir, we have also addressed a letter of inquiry to Mr. H. C. M. Gordon, President and General Manager, Acadia Coal Company Ltd., and Mr. Gordon has replied to that in the same manner as the letter which Mr. Frawley read from Mr. McCall. This is a letter addressed to myself, dated 10th September, 1945, and which reads as follows:-

MEMORANDUM CONCERNING SHIFTS WORKED BY
EMPLOYEES OF THE ACADIA COAL COMPANY
DURING THE YEARS 1932 and 1944

In the year 1932, because of the lack of demand for coal, the mines of the Acadia Coal Company worked only 166 days. For the year the average daily output was 1,892 tons and the total output raised amounted to 314,128 tons.

In that year there was a plentiful supply of labor and the force employed by the Company was fully trained and highly skilled. On idle days the force employed was kept to a minimum and only those men required for necessary maintenance were employed on such idle days. All necessary maintenance work was done on idle days so that extremely little work of this nature had to be done on Sundays.

On working days every man in the employ of the Company who could possibly report for work did so and at the same time, because of a surplus of labor in the district, a small additional force was carried on the payroll to fill in the places of any employees who could not report for work. As a result of all this, absenteeism had no effect whatsoever on outputs and no overtime rates had to be paid for men working extra time to fill in for absentees.

In the year 1944 the picture had completely changed. Because of the demand for coal, full working time was available to the collieries which worked 287 days during the year. For a number of reasons, to be explained below, the average daily output was only 1,100 tons and the output for the year was only 315,678 tons.

The highly skilled force of pre-war years had, to a great extent, changed as is shown by the fact that from September 1st, 1939, to the end of 1944, 1,652 men had been hired into the Company's service. With a normal payroll force of 1,332 this means a labor turnover of 124%. During the same period some 1,686 men left the Company's service. Many of the new employees, placed in the Company's employ by the National Selective Service, had no desire to work in the coal mining industry. Many of them were without skill or training and, because of their lack of interest in the work, made no attempt to learn. All employees were frozen in the industry during 1944 so that they could not leave it even if they wished to do so, nor could the Company dispense with the service of undesirable employees except under extraordinary conditions. To make matters worse there was a general shortage of labor, both skilled and unskilled, not only in the mines but throughout the whole district.

Wages, between 1939 and 1944, had been greatly increased; for example, the minimum datal rate had risen from \$3.00 per shift to \$5.67 per shift, an increase of 89%. At the same time, consumer goods were in short supply so that many of the commodities on which the employees of the Company would have spent the increased earnings available to them could not be had and much of the incentive for the men to take advantage of these increased earnings was lost. At the same time, income tax, to which the men were not accustomed, was placed upon their earnings. All this, with the steadiness of work available, tended to cause absenteeism which amounted to 22.48% for all causes among the employees in 1944. Absenteeism among the actual producers of coal, for the same year, amounted to 31.07%.

This absenteeism cut very sharply into the production of coal and, at the same time, caused much overtime to be worked for which time and one-half had to be paid since in a very large percentage of cases absentees' places had to be filled by men who were kept over from the preceding shift.

At most collieries a certain datal force is required, both surface and underground on working days, irrespective of the actual tonnage of coal produced. Where, therefore, the producing force is short, either through absenteeism or through an actual shortage of such labor (and both shortages existed in 1944), the number of datal shifts worked increases for the tonnage obtained; for example, the same force of coal-handlers of all types and the same number of repair-men are required whether or not a full producing force is at work.

Because of the steady time available, much repair work, which could not be done while the mines were operating, had to be done on Sundays for which double time was paid. This very materially increased the number of shifts paid for in 1944.

The increase in tons per producer in 1944 as compared with 1932 is largely accounted for by the fact that more longwall coal was produced in the Albion and No. 7 Collieries in 1944. In 1932 the Albion output from longwall work was only 19.4% of the total output. This had risen to 40.6% in 1944. In No. 7 Colliery, in 1944, 46.2% of the output was from longwalls. The output per producer on these longwall faces amounts to approximately 20 tons per shift as compared with slightly less than 5 tons per shift in room and pillar work. In Acadia #3, which was largely a longwall colliery in 1932, the output per producers because of the lowness of the seam was very considerably less than the output per producer on longwalls in the Albion and No. 7 Collieries. In 1932 the overall percentage of longwall coal from the Acadia operations, including No. 3 Colliery, amounted to 23.8%. This has risen to 26.9% in 1944 and accounts for the higher tonnage per producer in the latter year.

To summarize, the increased number of shifts worked in 1944 as compared with 1932, when approximately the same tonnage of coal was raised, was due to -

(1) In 1944 a large part of the working force consisted of comparatively unskilled men, many of whom were frozen in the industry against their will. Their attitude toward their work was to do as little as possible for the highest rates they could obtain. In 1932 the force was highly skilled and fully trained.

(2) Excessive absenteeism in 1944, coupled with a shortage of labor particularly among producers, caused excessive payments for overtime work and, at the same time, diminished outputs.

(3) Steadiness of work caused much repair work to be done on Sundays at double time rates.

Office of the President & General Manager,
September 1945.

MR. MORRISON proceeds to read Exhibit 207:

OLD SYDNEY COLLIERIES LIMITED

R E P O R T

Old Sydney Collieries Limited was incorporated under The Companies Act of the Province of Nova Scotia, effective as of 1st August, 1938. Prior to that date, the coal operations subsequently carried on by Old Sydney were a department of Nova Scotia Steel and Coal Company Limited, and in the earlier history of the Scotia Company, was an integral part of its operations. Since the closing down of the steel plant at Sydney, the coal operations are more dependent for revenue on sales to the public.

As of 1st August, 1938, the Old Sydney Company issued 4,000 shares of \$100.00 each, or \$400,000.00 value, all of which was purchased by the Nova Scotia Steel and Coal Company Limited, for \$1,002,068.61.

MR. MORRISON: It might be just mentioned in passing that those are all of the shares issued by the company. (Continues brief):

This amount represented the capital employed by the Scotia Company in its coal operations, and was made up as follows:

Cash	\$137,256.63
Trade Accounts Receivable - Net	85,828.50
Other Accounts Receivable - Net	35,443.73
Coal on Hand	274,017.06
Supplies on Hand - Net	127,176.11
Due from Other Companies	467,407.20
Deferred Charges	49,962.94
	<u>\$1,187,092.17</u>
<u>Less Liabilities</u>	185,023.56
Net Working Capital	<u><u>\$1,002,068.61</u></u>

On 30th December, 1938, the Old Sydney entered into an agreement with the Scotia Company, whereby Old Sydney leased the following properties:-

1. Princess Colliery Approximating 140 acres of Coal Lands
2. Florence Colliery " 21 " " " "
3. Shipping Pier " 27 " " " "
4. Railway and Right-of-Way at Florence to the Shipping Pier in North Sydney.
5. All buildings, plant, machinery, electric transmission, telephone lines, water mains, rolling stock and equipment used in connection with the operation of the said collieries, railway and shipping pier.
6. Fourteen Coal Leases.
7. All underground railways, shafts, cages, haulageways, deeps, levels and working as the same now are and including the right to search for, win, mine, work, get, raise and carry away the coal in the above leases.

Under the agreement, Old Sydney contracted as follows:-

1. take over operation as of 1st August, 1938;
2. pay a rental of \$60,000.00 per year;
3. pay all taxes, lease rentals, royalties, insurance, etc.
4. maintain the demised premises in as good condition as they now are, reasonable wear and tear and depletion and damages resulting from causes beyond the control of the Lessee excepted.

The above agreement was amended, under date of 2nd March, 1943, so that, commencing 1st January, 1942, Old Sydney was to pay the Scotia Company depletion at the rate of ten cents per ton in addition to the annual rental of \$60,000.00.

Prior to 1938, the attached statements deal with the coal division of Nova Scotia Steel and Coal Company Limited. This company was placed in receivership early in 1933, and was operated by receivers, acting on behalf of the bondholders, and by liquidators, acting in the interests of shareholders, until 31st July, 1938. On that date, the Scotia Company was re-organized and separate companies formed to transact the different classes of enterprise formerly operated by Scotia, with Old Sydney leasing and operating the coal properties, as outlined in the agreement.

BALANCE SHEETS - Statements Nos. 1 and 2

A summary of the Balance Sheets as at 1st August, 1938 and 31st December, 1944, as supplied by the company, is as follows:-

<u>Assets</u>		1st August, 1938	31st December, 1944
Current Assets	\$	669,722.03	\$1,543,352.14
Due from Associated Companies		467,407.20	17,011.23
Deferred Charges		49,962.94	16,037.14
		<u>\$1,187,092.17</u>	<u>\$1,576,400.51</u>
<u>Liabilities</u>			
Current Liabilities	\$	176,669.21	\$ 89,877.32
Due to Associated Companies		8,354.35	82,702.71
Capital		400,000.00	400,000.00
Reserves			
Contingent	\$	155,907.42	\$ 232,193.34
Renewals and Betterments		240,117.03	297,968.03
Development		187,349.90	192,656.37
Cargo Insurance		18,694.26	17,676.85
	\$	<u>602,068.61</u>	<u>\$ 740,494.59</u>
Surplus			263,325.89
		<u>\$1,187,092.17</u>	<u>\$1,576,400.51</u>

From the above, it will be seen that Old Sydney is in a strong financial position, with current assets exceeding liabilities as at 31st December, 1944 by approximately \$1,400,000. A surplus of \$263,325.89 has been built up, after charging a total of \$93,841.03 for income taxes and increasing reserves by \$138,425.98, or a total of \$495,592.90 in the six and one-half year period. No dividends have been paid to the parent company.

PROPERTIES LEASED - Schedule "B" - 1.

The above schedule details the assets of the Scotia Company, for which Old Sydney now pay \$60,000.00 a year rental plus ten cents per ton depletion.

At the date of re-organization of the Scotia Company, the properties had a book value of \$7,984,204.13

from which, the accumulated depreciation reserve was written-off in the amount of 2,476,632.28

leaving a net book value of \$5,507,571.85

A further adjustment was written-off to the surplus account of 2,303,972.68

resulting in a net book value at 1st August, 1938 of \$3,203,599.17

Expenditures on capital account by
the Scotia Company, 1st August, 1948
to 31st December, 1944 have been
made totalling

21,893.94

making the net book value 31st Decem-
ber, 1944

\$3,225,498.11

For the operating use of the above properties, Old Syd-
ney has paid as follows:-

1938	Rental of	\$25,000.00	
1939	" "	60,000.00	
1940	" "	60,000.00	
1941	" "	60,000.00	
1942	Rental and depletion of	117,345.90	
1943	" " " "	113,628.00	
1944	" " " "	112,944.40	<u>\$548,918.30</u>

PROFIT AND LOSS - Statements Nos. 3 to 5

Statement No. 3 - Profit and Loss, 1930-1935	Nova Scotia - Coal Division
No. 4 - Profit and Loss, 1936-1939)	Nova Scotia - Coal Division and Old Sydney Collieries Limited
No. 5 - Profit and Loss, 1940-1944	Old Sydney Collieries Limited

The operations, as reflected in the financial statements
of the company, have been grouped into three periods to cover
certain business cycles which may be termed as follows:-

1930 to 1935	Depression Years
1936 to 1939	Normal or Standard Years
1940 to 1944	War Years

The results of operations over the above period (1930
to 1944) are tabulated below. The minus figures indicate losses.

	Year	Amount	Per Ton
Company Operation	1930	\$-414,038.99	\$-.829
	1931	-514,927.73	-1.105
	1932	-377,750.54	-.977
Receivers Operation	1933	-305,462.53	-.852
	1934	-292,511.25	-.482
	1935	17,078.17	.032
Average - 1930 to 1935		<u>\$-314,591.99</u>	<u>\$-.661</u>
Receivers Operation	1936	\$-163,950.38	\$-.268
	1937	-356,969.50	-.560
	1938	-431,503.08	-.795
Company Operation	1939	16,646.52	.027
Average - 1936 to 1939		<u>\$-231,724.43</u>	<u>\$-.367</u>

	<u>Year</u>	<u>Amount</u>	<u>Per Ton</u>
Company Operation	1940	\$ -28,604.37	\$-.044
	1941	-57,329.19	-.097
	1942	226,542.86	.330
	1943	167,029.24	.275
	1944	15,974.01	.026
<u>Average - 1940 to 1944</u>		<u>\$ 64,722.50</u>	<u>\$.102</u>

Included in the above results are the following:-

1. 1930 to 31st July, 1938 - A proportion of the bond interest on the funded debt of the Nova Scotia Company. This interest was not paid from 1932 on, but on the first mortgage bonds of the Scotia Company, was settled by the issuance of Dosco B. shares, and in respect to the interest on the debenture stock of the Scotia Company outstanding, this was capitalized and formed part of the new six per cent debenture issue to Dosco which, in turn, issued shares of Dosco B. to the original holders.
2. 1930 to 1939 - Depreciation at twenty cents per ton.
3. 1938 to 1944 - Rentals and Depletion to the Scotia Company, as mentioned hereinbefore.

SALES - Schedules "S" - 1 to "S" - 13.

Summary of Sales - Schedule "S" - 1

Sales to the public constitute approximately ninety per cent of the total tonnage sold for all years except 1931 and 1943, when twenty-three per cent and thirty-five per cent were sold to the Dominion Company, Steel Division, the remaining ten per cent being used by the company, sold to employees or to associated companies.

Summary of Sales to the Public -
Schedules "S" - 2 and "S" - 3

Schedule "S" - 3 sets out in detail the price received at the mines for all coal sold to the public, and is further segregated by grades.

Using representative years, the following variations are shown in the net price received at the mine:-

Grade - Mine Run

	<u>High</u>	<u>Low</u>
1930	\$6.260	4.091
1933	5.693	3.695
1936	5.560	3.999
1939	6.004	3.955
1942	6.928	3.844
1944	8.109	6.486

Grade - Slack

1930	\$4.164	2.711
1933	4.194	3.088
1936	4.384	3.302
1939	4.333	2.850
1942	5.825	3.501
1944	7.342	4.689

Note:- In using the above prices, sales to customers of low tonnages have been excluded.

Average Selling Price Received - All Grades

1930	\$4.657
1933	4.117
1936	4.126
1939	4.310
1942	5.217
1944	6.721

Summary of Sales to the Steel Division -
Schedule "S" - 8

A comparison of the price received at the mines in years of sales of 15,000 tons and over to the Steel Division, with the sales to the public, is as follows:-

	<u>Price to</u> <u>Steel</u> <u>Division</u>	<u>Price</u> <u>to</u> <u>Public</u>
1931	\$3.167 (Mine Run)	\$4.379 (Mine Run & Slack)
1938	4.066 Do.	4.280 Do.
1942	4.217 (Mine Run and Slack)	5.217 Do.
1943	5.458 Do.	5.800 Do.

BY MR. FORSYTH: In the earlier years, before '38, to whom were those sales made? They would be made to the steel division of the Dominion Company, I would suggest?

MR. MORRISON: Just a second. We will just check up on that to be absolutely sure.

BY MR. FORSYTH: Oh well, we will be able to find out later.
You go on.

MR. MORRISON continues Report:

Comparing the selling price of these sales with the mining cost, the loss to the coal operations, as shown by Schedule "S" - 8, over the fifteen year period, amounts to

\$260,873.39, of which \$173,608.66 occurred in 1931.

Summary of Sales to Black Diamond and
Time Charter Bunkers - Schedule "S" - 9

Using the same years as above, the average price received is as follows:

1931	\$4.150	(Mine Run)
1938	3.867	do.
1942	4.285	do.
1943	4.101	do.

As shown by Schedule "S" - 9, the loss to coal operations on these sales amounts to \$53,320.58 over the fifteen year period.

Summary of Sales -
Company Railway and Company Consumption -
Schedules "S" - 10 and "S" - 11

These two schedules represent the value placed on coal used in operations, and is included in the mining costs.

Summary of Sales to Employees -
Schedules "S" - 12 and "S" 12(1)

The above schedule shows in detail the sales to employees. Included in the price received from employees is an amount charged to mining costs as set out in Schedule "S" - 12(A). The loss on sales to employees varies from \$6,700.00 to \$30,900.00 per year, with an average over the fifteen years of \$16,600.00. The total loss in respect of sales to employees over the fifteen year period was \$249,529.42, as shown by Schedule "S" - 12(A).

Sales Costs - Schedule "S" - 14

The costs per ton are as follows:

1932	\$.897	1938	\$1.329
1933	1.131	1939	1.264
1934	1.411	1940	1.610
1935	1.333	1941	1.660
1936	1.252	1942	1.725
1937	1.375	1944	1.452

The fluctuations in cost of sales are mainly due to the variation, both as to quantity and method of shipment, in points of destination. Costs for the years 1930 and 1931 are not available in detail.

MINING COSTSDetailed Mining Cost Analysis

1930 to 1935 - Schedule "M" - 1
 1936 to 1939 - " "M" - 2
 1940 to 1944 - " "M" - 3

Included in the undernoted costs is a charge of twenty cents per ton for depreciation. As Old Sydney rents its properties from the Scotia Company, the proper charge, as from 1st August, 1938, is an annual rental of \$60,000.00 up to 31st December, 1941, and in addition, a further charge of ten cents per ton depletion for the years 1942 to 1944.

The final result is reflected in the Profit and Loss accounts, but for comparative purposes, the twenty cents per ton depreciation charge has not been varied.

<u>Year</u>	<u>Production Tons</u>	<u>Cost</u>	<u>Year</u>	<u>Production Tons</u>	<u>Cost</u>
1930	506,368	\$5.135	1936	613,193	\$4.135
1931	441,916	4.809	1937	642,903	4.452
1932	395,771	4.634	1938	532,079	4.920
1933	371,732	3.777	1939	608,489	4.271
1934	608,653	3.864	Average	<u>599,167</u>	<u>\$4.427</u>
1935	544,508	4.485			
Average	<u>477,823</u>	<u>4.442</u>			

<u>Year</u>	<u>Production Tons</u>	<u>Cost</u>
1940	640,779	\$4.535
1941	667,110	4.743
1942	669,051	4.766
1943	596,218	5.482
1944	609,688	6.381
Average	<u>636,570</u>	<u>\$5.151</u>

Schedule "M" - 4 sets out the per ton costs by mines for the years 1936 and 1939 to 1944 inclusive which, on the basis of company charges, are as follows:-

	<u>Princess</u>		<u>Florence</u>	
	<u>Production Tons</u>	<u>Cost</u>	<u>Production Tons</u>	<u>Cost</u>
1936	344,199	\$4.154	268,994	\$3.936
1939	344,776	4.083	263,713	4.304
1940	372,775	4.313	268,004	4.607
1941	373,755	4.601	293,355	4.773
1942	409,218	4.337	259,833	5.180
1943	353,842	5.076	242,370	5.956
1944	364,999	5.940	244,689	6.859

Schedule "M" - 7 details the operating work orders charged to mining costs. Of the items included therein, the following are of a capital, or deferred nature, and the

classification of them as between operations or capital should be further discussed.

As the coal operations of Old Sydney commenced as at 1st August, 1938, we are listing the various items only for the years 1939 to 1944. (Cents omitted).

	<u>1939</u>	<u>1940</u>	<u>1941</u>	<u>1942</u>	<u>1943</u>	<u>1944</u>	<u>total</u>
<u>Princess Mine</u>							
Shaker Engines				1,409			\$ 1,409
Pit Tubs	19,355	20,193	21,089	5,409			66,046
Coal Cutters		6,933	7,146			4,331	18,410
Conveyor							
Troughing		4,894	5,398	5,430		1,363	17,085
Level Conveyor							
Units					10,779	26,686	37,465
<u>Florence Mine</u>							
Induction Motor				3,798			3,798
Shaker Engines				2,615			2,615
Pit Tubs	22,413	20,832		10,885	15,310	26,894	96,334
Conveyor							
Troughing	3,847	2,983	5,346	1,043	12,666	6,054	31,939
Coal Cutters	5,109	6,933	7,146			8,662	27,850
Haulage Engines				6,166			6,166
Level Conveyor							
Units					4,231		4,231
	<u>50,724</u>	<u>62,768</u>	<u>46,125</u>	<u>36,755</u>	<u>42,986</u>	<u>73,990</u>	<u>313,348</u>

Included as charges to mining costs through various operating reserves, are expenditures of a similar nature to those listed above. These are dealt with under the heading of "Reserves", later in this report.

Schedule "M" - 9 is a summary of the mining costs, showing the percentages of cost under the main headings. The averages are tabulated:-

	<u>Average</u> <u>1930-1935</u>		<u>Average</u> <u>1936-1939</u>		<u>Average</u> <u>1940-1944</u>	
	<u>Cost</u>	<u>Per Cent</u>	<u>Cost</u>	<u>Per Cent</u>	<u>Cost</u>	<u>Per Cent</u>
Labor	\$2.496	56.191%	\$2.598	58.685%	\$3.060	59.406%
Material	.525	11.819	.585	13.214	.661	12.832
Power	.374	8.420	.306	6.912	.300	5.824
Renewals and						
Betterments	.061	1.373	.021	.475	.051	.990
Depreciation	.200	4.502	.200	4.518	.190	3.688
General Charges	.719	16.186	.635	14.344	.813	15.784
Banking	.067	1.509	.082	1.852	.076	1.475
Total	<u>\$4.442</u>	<u>100. %</u>	<u>\$4.427</u>	<u>100. %</u>	<u>\$5.151</u>	<u>100. %</u>

It will be seen from the above that labor is the main governing factor in the total cost and the percentage has remained fairly constant over the fifteen year period, increasing from fifty-six per cent to fifty-nine per cent.

RESERVES

Schedules "R" - 1 - Summary of Operating and Contingent Reserve
 "R" - 2 - Details of Contingent Reserve
 "R" - 3 - Details of Renewals and Betterments Reserve
 "R" - 4 - Details of Development Reserve
 "R" - 5 - Details of Reserve for Cargo Insurance

Schedules "R" - 6 - Details of Reserve for Bad Debts
 "R" - 7 - Details of Reserve for Inventories

Summary of Operating and Contingent Reserves - Schedule "R" - 1

A summary of the provision from profit and loss and the charges to the reserves for the period subsequent to 1st August, 1938 is tabulated here under:-

	Net Provision from Profit and Loss	Expenditure
1938	\$ 45,334.14	\$ 25,506.55
1938	985.74	
1939	125,432.75	60,936.39
1940	103,666.61	106,463.17
1941	196,047.83	183,495.81)
		14,490.17)
1942	235,060.48	164,896.57
1943	219,349.43	226,018.03
1944	208,498.05	214,142.36
	<u>\$1,134,375.03</u>	<u>\$ 995,949.05</u>
Net Increase in Reserves		<u>\$ 138,425.98</u>

The above increase occurred in the undernoted years:-

1938	\$ 20,813.33
1939	64,496.36
1940	-2,796.56
1941	-1,938.15
1942	66,905.10
1943	-3,409.79
1944	-5,644.31

\$138,425.98

Contingent Reserve - Schedule "R" - 2

This reserve was increased by \$20,845.00 in 1938, and by \$61,699.80 in 1939 by charges to profit and loss shown under the heading of "Depreciation", or a net increase of \$82,544.80. It was reduced in 1941 by a transfer to Bad Debts Reserve of

\$14,490.17 and accounts written-off of \$3,448.02 which, together with a provision of \$10,693.57 from profit and loss, makes a net reduction for 1941 of \$7,244.62. The net increase in this reserve over the period amounts to \$75,300.18.

Renewals and Betterments Reserve -
Schedule "R" - 3

Charges were made to profits, as follows:-

1942	10¢ per Ton	\$ 66,905.10
1943	10¢ " "	59,621.80
1944	10¢ " " (Princess Mine Only)	36,499.90
		<u>\$163,026.80</u>

The reserve was debited with the cost of new haulage equipment for the Princess Colliery, as follows:-

1943	\$63,031.59	
1944	<u>42,144.21</u>	<u>105,175.80</u>
or a net increase of		<u>\$57,851.00</u>

We are informed that several years ago a serious accident was caused at the Princess Colliery due to the failure of a rope on the Man Rake, and it was decided to replace the Steam Rake Engine on the surface with an electric unit in the mine at the foot of the shaft. This was recommended by the Department of Mines as a safety measure, and resulted in the above expenditure.

Development Reserve -
Schedule "R" - 4

Charges were made to profits, as follows:-

1940	\$41,872.57	
1941	<u>124,806.56</u>	
1942	33,037.13	
1943	44,788.23	
1944	<u>57,763.87</u>	\$302,268.36

302,208.56

The reserve has been debited with costs as follows:-

Relay Haulage - Florence	43,426.24	
Longwall Equipment - Princess	94,076.53	
Deep Construction - "	21,237.98	
Airway Enlargement - Florence	18,266.83	
Airway Construction - Princess	7,266.78	
South Return Airway - Florence	25,554.24	
North Return Airway - "	30,343.34	
Airway Construction - Princess	22,887.01	
Airway Construction - Florence	10,866.77	
Rake Road Extension - Princess	23,036.12	296,961.89
Net Increase in Reserve		<u>\$ 5,306.47</u>

The above expenditures were made in the years

1940	\$ 41,872.57
1941	119,500.09
1942	33,037.13
1943	44,788.23
1944	57,763.87

\$296,961.89

Comments on Reserves

When Old Sydney was formed as of 1st August, 1938, it acquired, in current assets, the following reserves:-

Contingent Reserve (Net)	\$155,907.42
Renewals and Betterments	240,117.03
Development	187,349.90
Cargo Insurance	18,694.26
Total Reserves	<u>\$602,068.61</u>

After a period of operations of approximately six and one-half years, these reserves have been increased by the amount of \$138,425.98, bringing the total at 31st December, 1944 to \$740,494.59, as shown by the Balance Sheet.

One of the first questions raised is the purpose of such reserves and whether or not a company such as Old Sydney requires reserves of the above amount.

While it is not a uniform practice among Canadian coal companies, the setting aside out of operations of an amount each year for substantial expenditures can be recognized as a means of equalizing operating costs. So long as the reserves in question are not in excess of normal requirements, such treatment in the accounts would be acceptable. With such a procedure, however, all actual expenditures are chargeable to the reserves, and not to operations. The question of the nature of the expenditures, viz. Capital or Operating, is still a moot point, but as these expenditures have been provided for over a

period of years, the matter of allocation as between Capital and Operating loses some of its difficulty.

In the case of Old Sydney, the Company has on its records various reserves, but in effect, the expenditures made in more recent years are charged to operations, so that the spreading over a period of years of such expenditures is not accomplished.

The fact that such expenditures are charged by the company to various reserves suggests that, in the opinion of the company, these disbursements are not in exactly the same categories as ordinary operating expenses.

We have previously mentioned that Schedule "M" - 7 gave the details of the operating work orders charged to costs, and pointed out that certain of these appeared to be of a capital nature.

The expenditures which are charged to the various operating reserves, and which are enumerated in this report, are of a somewhat similar nature, and are, therefore, the subject of enquiry as to their correct classification.

The ascertainment of the correct classification for the foregoing items is a very complex problem, and we are, therefore, placing before your Commission the detailed accounting material, showing the nature and amount of such disbursements, which are summarized hereunder:-

<u>Particulars</u>	<u>1939</u>	<u>1940</u>	<u>1941</u>	<u>1942</u>	<u>1943</u>	<u>1944</u>	<u>Total</u>
Operating Work							
Order, Schedule "M"-7	50,724	62,768	46,125	36,755	42,986	73,990	313,348
Reserve for Betterments and Renewals, Schedule "R"-3					63,032	42,144	105,176
Development Reserve, Schedule "R"-4		41,873	19,500	33,037	44,738	57,763	296,961
	<u>50,724</u>	<u>104,641</u>	<u>105,225</u>	<u>39,792</u>	<u>150,800</u>	<u>173,897</u>	<u>5715,485</u>

Reserve for Bad Debts

From 1st August, 1938 to 31st December, 1944, there have been uncollectible accounts written off, as tabulated below:-

Rent, Coal and Water Accounts	\$15,613.94
Trade Accounts	5,357.83
Employees' Balances as at 28th July, 1938, written-off, as recommended by the McTague Board	74,759.34
	<u>\$95,731.11</u>

Summary of Bad Debts Reserve,
1st August, 1938 to 31st December, 1944

Balance at beginning of Perior	\$ 70,437.38
Provided from Profits	24,543.82
Do. - Tenements	4,003.85
Transferred from Contingent Reserve	14,490.17
	<u>\$113,475.22</u>
<u>Deduct write-offs, as above</u>	95,731.11
Balance, 31st December, 1944	<u>\$ 17,744.11</u>

The above reserve is provision against some \$445,000.00 due to the company, and appears reasonable.

PROFIT AND LOSS SUMMARY

Previously in this report, we have pointed out that the mining costs were charged with depreciation at twenty cents per ton, but that the final Profit and Loss Account reflected the correct result.

The following is a reconciliation of the final Profit and Loss Accounts for the years 1939 to 1944:-

	<u>1 9 3 9</u>	<u>1 9 4 0</u>	<u>1 9 4 1</u>
Net Sales	<u>\$2,620,070.53</u>	<u>\$2,786,469.65</u>	<u>\$3,022,704.98</u>
<u>Deduct</u>			
Mining Cost	2,598,915.61	2,899,783.98	3,164,120.14
Depreciation Adjustment		-68,155.80	-73,422.00
Reserve Adjustments	8,940.08	-8,940.08	
	<u>2,607,855.69</u>	<u>2,822,688.10</u>	<u>3,090,598.14</u>
	\$ 12,214.84	-36,218.45	-67,933.16
<u>Add Miscellaneous Income</u>	<u>4,431.68</u>	<u>7,614.08</u>	<u>10,603.97</u>
Profit or Loss (-) before Income Taxes	<u>16,046.52</u>	<u>\$- 28,604.37</u>	<u>\$- 57,329.19</u>

	<u>1 9 4 2</u>	<u>1 9 4 3</u>	<u>1 9 4 4</u>
Net Sales	<u>\$3,435,040.80</u>	<u>\$3,155,400.24</u>	<u>\$3,999,523.75</u>
<u>Deduct</u>			
Mining Cost	\$3,189,141.63	3,268,415.66	\$3,890,635.36
Retroactive Wages	78,951.58		69,625.90
Cost of Living Bonus			
refunded by Government	-52,055.30	-89,793.64	-15,151.50
Increase in Sales Price			
Paid to Meadia Company			61,092.21
Reserve Adjustments		5,393.22	-5,393.22
	<u>\$3,216,037.91</u>	<u>\$3,184,015.24</u>	<u>\$4,000,808.75</u>
	\$ 219,008.89	149,451.00	-1,285.00
<u>Add Miscellaneous Income</u>	<u>7,533.97</u>	<u>17,578.24</u>	<u>17,259.01</u>
Profit or Loss (-),			
before Income Taxes	<u>\$ 226,542.86</u>	<u>\$ 167,029.24</u>	<u>\$ 15,974.01</u>

The final disposition of the various expenditures which may be of a capital or deferable nature nature, will affect mining costs, the operating results and the Balance Sheets. We are of the opinion, subject to engineering confirmation of the purpose of the work, that such expenditures should be spread over a period of years. In addition, the increase in the reserves which, over the period 1938 to 1944, increased in the amount of \$138,425.98, bringing the available reserves from a commencing figure of \$602,068.61 to a total of \$740,494.59 at 31st December 1944, should also be the subject of adjustment.

In this connection, we again raise the point as to the ultimate purpose of these reserves and the time when expenditures should constitute a charge against them, rather than being charged to the annual mining costs.

In addition to the foregoing adjustments, the following items should also be considered as to their possible effect on the annual operating results:-

	Dominion Coal	Tren- ton	Eastern Car	Steel Division	Black Diamond Bunkers	Total	
(a) Loss on Sales to Associated Companies - Schedules "S" 4 - 9							
1939				880.68	560.27	1,440.95	
1940	654.59			4,332.71	945.31	5,932.61	
1941				3,839.63	2,445.44	6,285.07	
1942		-454.06	-35.84	18398.64	1,473.30	19,382.04	
1943				5,058.89	1,382.38	6,441.27	
1944		27.50	70.08	8,165.26	4,802.97	13,065.81	
	<u>\$ 654.59</u>	<u>-426.56</u>	<u>34.24</u>	<u>40675.81</u>	<u>11609.67</u>	<u>\$52,547.75</u>	52,547.75

(b) Loss on Sales to Employees -
Schedule "S" - 12(A)

1939		\$10,104.92	
1940		14,272.17	
1941		21,834.95	
1942		21,220.61	
1943		36,588.08	
1944		30,897.61	134,918.34

Total Loss (a) and (b)

\$ 187,466.09

MINERS' EARNINGS ETC.

Statement of Production, in Tons, per Man -
Schedule "E" - 1

The above statement shows the production, in tons, per man, of the labor employed, with the peaks shown below.

<u>Surface Labor</u>	High	11.95	Tons	1939
	Low	9.12	"	1943
<u>Underground Labor</u>	High	4.50	"	1933
	Low	3.79	"	1941
<u>Mining Labor</u>	High	5.07	"	1943
	Low	3.99	"	1930
<u>Total Labor</u>	High	1.88	"	1933
	Low	1.64	"	1930

Shifts Worked - Schedule "E" - 2

<u>Surface Shifts</u>	High	65,366	1943
	Low	33,488	1933
<u>Underground Shifts</u>	High	175,960	1941
	Low	82,689	1933
<u>Mining Shifts</u>	High	151,642	1937
	Low	81,723	1933
<u>Total Shifts</u>	High	388,538	1941
	Low	197,900	1933

Average Earnings for Representative Years -
Schedule "E" - 3

A summary of the above schedule is:-

	Datal Men		Local Contracts		Mining Contracts		Total All Classes	
	Daily	Annual	Daily	Annual	Daily	Annual	Daily	Annual
1931	\$4.16	728.66	8.06	1,419.76	6.08	847.07	5.09	831.96
1936	3.44	772.86	6.80	1,372.49	5.68	1,056.24	4.31	917.15
1939	3.70	830.44	7.09	1,299.09	6.39	1,196.38	4.51	956.86
1940	3.72	919.37	7.02	1,489.43	6.23	1,350.52	4.47	1,062.30
1941	4.02	1,046.92	7.02	1,539.27	6.25	1,410.75	4.66	1,163.26
1942	4.55	1,251.20	7.44	1,530.82	7.64	1,879.90	5.23	1,377.13
1943	5.31	1,408.84	8.42	1,692.32	8.70	2,109.79	6.05	1,527.50
1944	6.13	1,647.38	9.24	2,174.93	9.57	2,163.04	6.86	1,777.01

Comparison of Annual Output
with Man-Shifts 1939 - 1944 (000 omitted)

Year	Tons Output	M a n - S h i f t s			Total	Tons Per Man	Labor Costs per Ton
		Surface	Underground	Mining			
1939	608	51	142	135	328	1.86	\$2.549
1940	641	56	163	149	368	1.75	2.67
1941	667	62	176	151	389	1.72	2.719
1942	669	64	164	135	363	1.84	2.798
1943	596	65	147	118	330	1.85	3.311
1944	610	63	152	124	339	1.80	3.891

From the above summary, it will be seen that for approximately the same output in 1939 and 1944 (608,000 and 610,000 tons), the man-shifts necessary were greater by 11,000 shifts as follows:-

Surface labor	-	Increased	-	12,000 shifts
Underground "	-	Increased	-	10,000 shifts
Total Increased Shifts			-	22,000 shifts
Mining labor	-	Decreased	-	11,000 shifts
Net Increased Shifts			-	11,000

The operating results for the above two years are as follows:-

1939	-	Profit	-	\$16,646.52
1944	-	Profit	-	\$15,974.01

MR. MORRISON: Now in that connection, Mr. Chairman, I mentioned to Mr. Gordon about this matter and I have not received any explanatory report as in the case of Acadia. I don't know whether Mr. Gordon has intended that it should be filed.

BY MR. FRAWLEY: But if one is received, we will read it into the record as in the case of the other.

MR. MORRISON then reads Exhibit 208, as follows:

VARIOUS COAL COMPANIES - NOVA SCOTIA

REPORT

Companies dealt with:

<u>Name</u>	<u>Location</u>	<u>Tonnage Basis</u>
Bras d'Or Coal Co. Ltd.	Bras d'Or, N. S.	Long
Greenwood Coal Co. Ltd.	New Glasgow, N. S.	Short
Hillcrest Mining Co. Ltd.	River Hebert, N.S.	Short
Indian Cove Coal Co. Ltd.	Sydney Mines, N. S.	Shore
Intercolonial Coal Co. Ltd.	Westville, N. S.	Long
Joggins Coal Co. Ltd.	Amherst, N. S.	Short
Standard Coal Co. Ltd.	Amherst, N. S.	Short
Sullivan Coal Co. Ltd.	Sydney Mines, N.S.	Short

Comments on the capitalization, earnings, costs,
sales, etc., for the various companies are
submitted herewith:--

Bras d'Or Coal Company Ltd..

The Bras d'Or Company is capitalized at \$782,700.00, divided into \$182,900 in Common shares and \$599,800 Preferred, Dividends have been paid on the Preferred at 2% for the years 1930 and 1931, and at 1% in 1933 and 1936.

Coal areas were valued in 1917 at \$50,000 for which shares were issued and in 1920 additional leases were secured for which \$138,000 in shares were issued. A bond issue was made in 1921, the consideration for which was coal areas to the amount of \$750,000, making a total of \$938,000. These values have been reduced by depletion charges of \$402,495.47 and leases sold of \$7,977.05, leaving the balance at 31st December, 1944, of \$527,527.48. Depletion has been set up on the books for all years at 10 cents per ton.

The Bond issue referred to above was exchanged for shares prior to 1930.

Equipment having a value of \$202,661.75 was written off in the year 1928 having been fully depreciated.

Further equipment to the value of \$174,807.23 for plant, buildings, etc., was purchased during the years 1929 to 1944 and depreciation set up for the years 1942, 1943 and 1944, totalling \$69,887.04.

Approximately 80% of the coal sold is supplied to dealers at an average price for selected years as follows:

1936	\$3.30	(Run of Mine)
1941	3.76	(Run of Mine)
1942	4.16	(Run of Mine)
1943	4.12	(Run of Mine)
1944	5.07	(Run of Mine)

The following is a condensed summary of operations:-

<u>Year</u>	<u>Production (Long Tons)</u>	<u>Profit or Loss</u>
1930	108,950	\$ 5,165.
1931	97,270	-297.
1932	80,131.	-17,041.
1933	54,016	-11,907.
1934	80,072	948.
1935	93,693	-2,245.
1936	100,867	6,520.
1937	113,478	2,275.
1938	127,846	2,966.
1939	111,459	-3,992.
1940	147,258	3,203
1941	160,992	5,389
1942	178,093	7,849.
1943	127,374	-12,887.
1944	131,396	-55,438.

We are informed that claims have been made to the Emergency Coal Production Board for subsidies, but no amount for such is included in the above figures.

BY MR. MORRISON - Now we have subsequent information that the claim made for the year ended May 31st, 1944, amounted to \$47,473.07.

BY COMMISSIONER MORRISON - Has it been paid?

A. We have no definite information on that. We understand the claim was made, but we have not the information as to whether it has been paid.

BY THE CHAIRMAN - Why would it not be made for the whole amount of \$55,438.?

A. Well there may be some items in there you see that the Emergency Coal Production Board will not recognize as a proper operative loss for their purposes.

MR. MORRISON continues Report

The following is an analysis of the mining cost per long ton:--

<u>Year</u>	<u>Labor</u>	<u>Material</u>	<u>Depreciation & Depletion</u>	<u>Other Charges</u>	<u>Total</u>
1930	\$ 2.440	\$.676	\$.10	\$.694	\$ 3.910
1931	2.587	.605	.10	.728	4.020
1932	2.533	.884	.10	.768	4.285
1933	2.511	.649	.10	.920	4.180
1934	2.180	.751	.10	.713	3.744
1935	2.245	.745	.10	.660	3.750
Average	\$ 2.414	\$.718	\$.10	\$.730	\$ 3.962

Note: No depreciation charged until 1942.

1936	\$ 2.254	\$.670	\$.096	\$.616	\$ 3.636
1937	2.255	.745	.092	.580	3.672
1938	2.415	.737	.10	.568	3.820
1939	2.652	.544	.10	.654	3.950
Average	\$ 2.397	\$.677	\$.097	\$.604	\$ 3.775
1940	\$ 2.358	\$.664	\$.10	\$.548	\$ 3.670
1941	2.457	.984	.10	.551	4.092
1942	3.165	.743	.199	.638	4.745
1943	3.501	.683	.255	.761	5.200
1944	4.077	.845	.233	.832	5.987
Average	\$ 3.071	\$.787	\$.174	\$.656	\$ 4.688

Greenwood Coal Company Ltd., - New Glasgow, N. S.

The above company is capitalized at \$30,000.00, and is a private company, all stock being owned by the Directors. It was incorporated in 1916, and has mined 1,264,000 tons of coal since date of organization to 1944.

Three different locations were mined during the Company's history, as undernoted:-

Greenwood No. 1 Mine: from 1916 to 1931 with production of 653,000 tons. This operation also included three sub-leases from the Acadia Coal Company Limited.

Greenwood No. 2 Mine: from 1931 to 1941 in the McKay Seam with a production of 451,650 tons. This lease was obtained from the Nova Scotia Steel and Coal Company Limited.

Greenwood No. 3 Mine: from 1938 to date in the Captain Seam with production to 31st December, 1944, of 159,300 tons. This lease was also obtained from the Nova Scotia Steel and Coal Company Limited.

Royalties are payable to the Government and to the Nova Scotia Steel and Coal Company Limited at the rate of 12½ cents per ton each. During 1945, royalties amounting to \$7,725.80 were rebated by the above two parties. These royalties were in respect of the year 1944, and charged to operations of that year.

A summary of the results for 1930 to 1944 is reproduced below:-

<u>Year</u>	<u>Tonnage (Short)</u>	<u>Profit or Loss</u>
1930	25,808	\$ 416
1931	23,993	4,298
1932	35,777	4,195
1933	53,838	11,313
1934	50,420	4,308
1935	52,530	- 1,631
1936	48,414	- 4,553
1937	52,894	- 774
1938	43,584	- 9,191
1939	40,155	- 4,927
1940	60,312	5,909
1941	47,756	2,783
1942	41,284	1,344
1943	34,565	-30,181
1944	31,206	-63,230

The above losses for 1943 and 1944 are before crediting Government subsidy of \$31,013.19 for 1943 and for 1944 - \$39,757.32. The 1944 subsidy represents the amount received during the year, and when received, the amounts are credited to the surplus account. (And not to the Profit and Loss Account above).

This Company has an investment of \$40,000.00 in the Common Shares of Intercolonial Coal Company Limited.

The following are the per long ton costs from 1930 to 1944:-

<u>Year</u>	<u>Cost</u> <u>(Long Ton)</u>
1930	\$ 5.12
1931	4.97
1932	4.84
1933	4.61
1934	4.85
1935	4.84
1936	4.82
1937	4.67
1938	4.85
1939	4.74
1940	4.49
1941	5.08
1942	5.71
1943	6.98
1944	9.18

Hillcrest Mining Company Ltd., - River Hebert, N. S.

This Company was incorporated 25th November, 1940, and is capitalized at \$120,000.00. All coal is sold to the Victoria Coal Company Limited. The coal areas mined are leased from the Tantramar Coal Company Limited and Joggins Coal Company Limited, on a 12½ cents per ton royalty basis.

As at the end of 1944, leases are valued at \$109,706.75, with a depletion reserve accumulation of \$5,684.59 at the rate of 2½ cents per ton.

BY THE CHAIRMAN - Do you know whether the Joggins Coal Company Limited and Tantrammar Coal Company Limited are operating at the present time?

A. Well we have statements of Joggins Coal Company, not the Tantrammar.

MR. MORRISON continues Report

The fixed assets are detailed as follows:-

<u>Asset</u>	<u>Cost</u>	<u>Depreciation Rate</u>	<u>Depreciation Reserve</u>	<u>Net Value</u>
Bank Head - Frame	\$ 6,354.51	5%	\$ 873.83	\$ 5,480.68
Buildings - Frame	641.31	5	86.62	554.69
Machinery and Equipment	46,328.58	10	12,588.15	33,740.43
Safety Lamps	14,145.60	20	5,658.24	8,487.36
Office Equipment	295.00	10	49.12	245.88
Truck	1,125.00	20	506.25	618.75
Railway Siding	<u>5,067.55</u>	5	<u>696.78</u>	<u>4,370.77</u>
	<u>\$ 73,957.55</u>		<u>\$ 20,458.99</u>	<u>\$ 53,498.56</u>
Slopes and Airways	<u>\$ 34,102.10</u>	10% per ton	<u>\$22,738.40</u>	<u>\$ 11,363.70</u>

For income tax purposes depreciation is allowed on slopes at 10% per annum.

An analysis of tonnage produced, the average force and shifts worked is tabulated as follows:-

<u>Year</u>	<u>Production Tonnage (Short Tons)</u>	<u>F O R C E</u>			<u>S H I F T S</u>		
		<u>Surface</u>	<u>Underground</u>	<u>Total</u>	<u>Surface</u>	<u>Underground</u>	<u>Total</u>
1942	68,413	24	96	120	6,865	21,586	28,451
1943	97,628	30	113	143	10,188	33,316	43,504
1944	88,218	27	107	134	9,875	32,958	42,833

Operation for 1942 has resulted in a profit of \$1,370.00; for 1943 - \$4,658.00; and for 1944 - a loss of \$14,110.00 after crediting subsidy received of \$31,511.00.

The following is an analysis of mining costs (long tons):

<u>Year</u>	<u>Labor</u>	<u>Material</u>	<u>Depreciation & Depletion</u>	<u>Other Charges</u>	<u>Total</u>
1942	\$ 2.173	\$.809	\$.193	\$.665	\$ 3.840
1943	2.324	.551	.221	.602	3.698
1944	3.013	.634	.228	.823	4.698

BY MR. MORRISON - On page 16 we have made reference to the fact that all coal was sold to the Victoria Coal Company Limited, and resulting from that we have requested the Victoria Coal Company Limited of New Glasgow to submit to us their financial statements, and these have just been received, and I think perhaps it should be noted on the record for future purposes, when you may want to examine into these to see if there is any relationship between them and the Hillcrest Company.

BY COMMISSIONER MORRISON - I take it that the Victoria Coal Company is a sales organization?

A. That is correct. A copy of the Agreement has been forwarded to us, so that we are holding the matter on the record for further examination.

MR. MORRISON continues Report

INDIAN COVE COAL COMPANY Ltd. - Sydney Mines, N. S.

This Company is capitalized at \$75,000.00, divided into Class "A" and Class "B" shares, the distinction between them being that the "A" shares participate from date of issue while the "B" shares participate in the earnings from 1st May, 1925. The Class "B" shares of \$60,000.00 were issued for leases.

From 1930 to 1941 total dividends have been paid of \$130,500.00.

Indian Cove operate the "Greener" Mine, leased from Nova Scotia Steel on a royalty of 10 cents per long ton; the "Tomson" Mine leased from Sydney Coal Company Ltd. on a royalty of 10 cents per ton. Until 1941, the "Sullivan Mine" was operated, paying Nova Scotia Steel a royalty of 12½ cents per ton. At that date, the Sullivan Coal Co. Ltd., was formed to transact the

business of the Sullivan Mine. In addition to the foregoing, royalties of $12\frac{1}{2}$ cents per long ton are payable to the Province on all mines.

Leases having an original value of \$60,000.00 have been written down to \$13,100.00 by charges to the surplus account in varying yearly amounts as follows:

Prior to 1930	\$23,491.88
1942	14,008.12
1943	3,300.00
1944	3,600.00
1936 - Sublease sold	<u>2,500.00</u>
	<u>\$46,900.00</u>

The fixed assets as at 31st December, 1944, are made up as follows:-

<u>Asset</u>	<u>Cost</u>	<u>Depreciation Rate</u>	<u>Depreciation Reserve</u>	<u>Net Value</u>
Office Equipment	\$ 126.50	10%	\$ 25.30	\$ 101.20
Slope and Machinery Tomson Mine	10,713.39	10	2,474.04	8,239.35
Horses	282.00	-	152.25	129.75
Land	<u>900.00</u>			<u>900.00</u>
	<u>\$ 12,021.89</u>		<u>\$ 2,651.59</u>	<u>\$ 9,370.30</u>

Over the fifteen years this Company has earned \$76,990.83, after all charges including fees to Directors of \$116,400.00. These results are summarized below:

<u>Year</u>	<u>Tonnage (Short)</u>	<u>Profit or Loss</u>
1930	51,162	\$ 16,042
1931	40,881	710
1932	28,932	-6,240
1933	30,851	-2,976
1934	40,324	1,397
1935	48,700	901
1936	45,984	-1,833
1937	55,323	5,845
1938	66,384	21,547
1939	63,386	16,604
1940	62,723	13,836
1941	47,652	6,216
1942	37,852	961
1943	33,774	663
1944	36,498	3,319

Subsidies are included in the year 1944 in the amount of \$12,482.53.

The following is an analysis of the mining costs (long tons):-

<u>Year</u>	<u>Labor</u>	<u>Material</u>	<u>Depreciation</u>	<u>Other Charges</u>	<u>Total</u>
1930)					\$ 3.840
1931)					3.972
1932)					4.074
1933)	Details not available				3.429
1934)					3.185
1935)					3.267
Average					\$ 3.612
1936	\$ 2.259	\$.142	\$.062	\$.861	\$ 3.324
1937	2.233	.189	.053	.833	3.308
1938	2.117	.103	.043	.861	3.124
1939	2.168	.158	.045	.795	3.166
Average	\$ 2.188	.147	.049	.838	3.222
1940	\$2.260	\$.129	\$.036	\$.892	\$ 3.317
1941	2.514	.167	.081	.938	3.700
1942	2.920	.227	.044	1.057	4.248
1943	3.171	.323	.039	1.168	4.701
1944	3.602	.305	.037	1.236	5.180
Average	\$ 2.794	\$.213	\$.048	\$ 1.033	\$ 4.088

No depletion charges are included in the above costs.

Intercolonial Coal Co. Ltd. - Westville, N. S.

The Intercolonial Company was formed in 1923 (then called the Intercolonial Sales Company Limited) by taking over the assets of the Intercolonial Coal Mining Company Limited by the issuance of shares in the new company at the rate of two new shares for one old of the Common, and share for share of the Preferred.

Preferred shares of a par value of \$217,900.00 were issued, of which \$20,600.00 have since been redeemed. Common shares, to the value of \$1,000,000.00 were issued with a valuation of \$500,000.00 placed on the Goodwill arising through the two-for-one

exchange.

Dividends at the rate of 8% have been paid annually on the Preferred stock in the aggregate amount of \$242,112.00, and total dividends on the Common for the fifteen years of \$650,000.00 have been paid at rates varying from 1% to 8% on the par value.

The capital assets, as at 31st December, 1944, have a book value of \$333,762.82 after being reduced by depletion at 10 cents per long ton and depreciation at 10 cents per ton for each of the years except 1934, when 20 cents per ton was written off, and in 1937 and 1938 an additional \$13,000.00 and \$10,000.00 was included in the depreciation charge.

Intercolonial is in a strong current financial position having current assets of approximately \$825,000.00, including \$585,000.00 of Dominion of Canada bonds, and current liabilities of approximately \$40,000.00.

A summary of the Profit and Loss account, before income taxes, is tabulated hereunder:

<u>Year</u>	<u>Tonnage</u>	<u>Result of Coal Operations</u>	<u>Investment Income</u>	<u>Profit</u>
1930	148,936	\$ 18,702.90	\$ 21,298.89	\$ 40,001.79
1931	133,223	- 4,998.75	21,150.00	16,151.25
1932	97,522	12,632.00	21,150.00	33,782.00
1933	105,791	19,286.12	21,534.43	40,820.55
1934	167,837	71,730.12	22,906.37	94,636.49
1935	127,926	20,518.74	23,750.00	44,268.74
1936	159,874	55,416.69	23,750.00	79,166.69
1937	206,906	58,511.15	24,278.68	82,789.83
1938	200,633	52,129.84	24,991.83	77,121.67
1939	172,027	36,077.43	25,577.76	61,655.19
1940	213,820	79,918.42	26,081.10	105,999.52
1941	178,554	57,566.45	26,434.47	83,990.92
1942	167,857	50,950.43	26,837.50	77,787.93
1943	150,314	3,320.69	26,312.76	29,633.45
1944	143,635	14,134.08	21,351.97	35,486.05
\$ 2,374,855		\$ 545,886.31	\$ 357,405.76	\$ 903,292.07

The operating result of \$14,134.08 profit for the year 1944 is after crediting a subsidy of \$86,049.66. The Company therefore sustained a loss on coal operations of \$71,915.58 before the subsidy for that year.

The following is an analysis of the mining cost per long ton:

Year	Labor	Material	Other Charges	Depreciation and Depletion	Total
1930	\$3.271	\$.744	\$.741	\$.200	\$4.956
1931	3.281	.820	.788	.200	5.089
1932	2.960	.747	.878	.200	4.785
1933	2.813	.718	.736	.200	4.467
1934	2.501	.568	.653	.300	4.022
1935	2.697	.689	.667	.200	4.353
<hr/>					
Average	\$2.911	\$.705	\$.750	\$.221	\$4.587
<hr/>					
1936	2.417	.611	.753	.200	3.981
1937	2.413	.558	.747	.263	3.981
1938	2.509	.563	.733	.249	4.054
1939	2.707	.589	.690	.200	4.186
<hr/>					
Average	\$2.508	\$.578	\$.728	\$.231	\$4.045
<hr/>					
1940	2.550	.595	.628	.200	3.973
1941	2.856	.670	.713	.200	4.439
1942	3.094	.858	.735	.200	4.887
1943	3.168	.925	.945	.200	5.238
1944	4.387	1.075	1.199	.200	6.861
<hr/>					
Average	\$3.137	\$.799	\$.816	\$.200	\$4.952

The years 1934 to 1940 include gifts to employees which vary from an approximate cost of 3 cents to 7 cents per ton.

BY COMMISSIONER MORRISON: Did all employees get these gifts, or was it just a favored few?

MR. MORRISON: We merely saw it on the mining cost sheet, "Gifts to Employees", with no particulars as to who may have received them. (Continues report):

Extraordinary charges included in the above costs are as follows:-

Year	Particulars			
1936	- Enlarging fan shaft	\$ 7,608.99	-	\$.048 per ton
1937	- Special Expenditure	20,063.08	-	.097 " "
	Reserve for Hazards	7,000.00	-	.034 " "
1938	- Reserve for Hazards	5,000.00	-	.025 " "
	Special Expenditure	3,031.79	-	.015 " "
1941	- Bore Hole from 1 to 2	835.15	-	.005 " "
	Fire Loss	6,095.21	-	.034 " "
1942	- Fire Loss	2,856.69	-	.017 " "
	Bore Hole from 1 to 2	1,539.87	-	.009 " "
1944	- Vacations with pay	10,049.69	-	.070 " "

On the schedule setting out the mining costs by Collier-ies, it will be observed that No. 2 Mine costs are consistently lower than the No. 1 and No. 5 Mines. Taking representative years the costs per ton are as follows:-

<u>Year</u>	<u>No. 1</u>	<u>No. 2</u>	<u>No. 5</u>
1930	\$4.915	\$4.666	\$6.031
1933	4.609	3.970	5.581
1936	4.456	3.292	4.866
1939	4.835	3.313	5.018
1942	5.774	4.358	5.719
1944	7.854	6.192	7.828

No. 2 produces approximately the same tonnage as both Nos. 1 and 5 added together.

Of the total coal sold to the public, the largest customer is the Canadian National Railway. Using selected years the details are as follows:-

<u>C. N. R.</u>			<u>Sales by Rail</u>		<u>Local</u>	
<u>Tons</u>	<u>Per Ton</u>		<u>Tons</u>	<u>Per Ton</u>	<u>Tons</u>	<u>Per Ton</u>
1930	103,781	5.10	12,653	7.11	10,858	6.11
1933	65,935	4.77	19,940	5.44	4,546	4.86
1936	100,173	4.26	34,580	4.94	7,839	5.09
1939	103,854	4.26	38,624	5.12	11,414	5.34
1942	77,259	4.82	29,563	5.75	8,125	5.63
1944	41,922	6.36	30,593	6.81	10,404	6.37

<u>Dept. of M. & S.</u>			<u>Total Public</u>	
<u>Tons</u>	<u>Per Ton</u>		<u>Tons</u>	<u>Per Ton</u>
1930			127,202	5.38
1933			90,421	4.92
1936			142,592	4.47
1939			153,892	4.55
1942	29,342	5.74	144,289	5.24
1944	37,498	7.81	120,417	6.93

An analysis of the force and shifts worked is detailed below:-

	<u>F o r c e</u>			<u>Production</u>	<u>Shifts Worked</u>		
	<u>Surface</u>	<u>Under-ground</u>	<u>Total</u>		<u>Surface</u>	<u>Under-ground</u>	<u>Total</u>
1930	-	-	-	150,172	-	-	119,930
1931	122	402	524	131,168	-	-	104,191
1932	120	377	497	98,039	-	-	77,446
1933	116	352	468	105,955	24,688	57,136	81,824
1934	116	361	477	167,718	30,326	79,853	110,179
1935	113	359	472	128,731	26,430	66,434	92,864
1936	105	355	460	159,017	29,232	74,278	103,510
1937	123	349	472	206,223	34,627	91,501	126,128
1938	120	356	476	202,604	34,170	92,690	126,860
1939	115	369	484	169,899	31,159	83,864	115,023
1940	112	339	451	213,893	35,120	98,873	133,993
1941	113	287	400	178,369	35,966	84,882	120,848
1942	113	231	344	168,009	36,671	71,582	108,253
1943	110	205	315	150,126	35,772	63,671	99,443
1944	110	222	332	143,774	35,437	67,766	103,203

Joggins Coal Company Ltd. - Amherst, N. S.

Joggins was incorporated on 16th June, 1939, with a capital stock of \$75,000.00, which was increased to \$125,000.00 in 1940. Of the original share capital \$74,700.00 was issued for Coal Leases and Bankhead.

Dividends totalling \$87,500.00 have been paid in the years 1941 to 1944.

As at the end of 1944, properties are valued at \$164,244.37, with depreciation and depletion set up of \$94,653.69, leaving a net value of \$69,590.68.

This Company operates the Bayview No. 8 Mine, located in the River Hebert district of Nova Scotia. Coal areas are also leased from the Tantrammar Coal Company on a royalty of 7½ cents per long ton and in turn sub-leased to the Hillcrest Mining Company at a royalty of 12½ cents.

A summary of the mining costs in long tons is as follows:-

<u>Year</u>	<u>Labor</u>	<u>Material</u>	<u>Royalties</u>	<u>Depletion & Depreciation</u>	<u>Taxes</u>	<u>Total</u>
1940	\$2.615	\$.111	\$.195	\$.152	\$.004	\$ 3.077
1941	2.760	.198	.195	.185	.011	3.349
1942	2.995	.278	.195	.186	.020	3.674
1943	3.244	.183	.199	.144	.021	3.791
1944	3.955	.278	.197	.150	.021	4.601

The operating results, before income tax, are as follows:-

1939 (4 months)	Profit	\$ 9,742.93
1940	Profit	37,963.23
1941	Profit	42,783.74
1942	Profit	35,441.98
1943	Profit	30,651.72
1944	Profit	19,865.89
		<hr/>
		\$176,449.49
		<hr/>

BY COMMISSIONER MORRISON: Leasing appears to be more profitable than mining.

BY THE CHAIRMAN: What Mr. Morrison means is that this company pays $7\frac{1}{2}$ cents to the Tantramar, whatever company that is, and then gets $12\frac{1}{2}$ cents. High leasing, isn't it?

MR. MORRISON: It makes a high royalty charge for the company that has to pay it.

BY MR. FRANKLEY: You remember that at the Amherst sittings we went into that. It struck us that royalties were high in that district.

BY THE CHAIRMAN: It is not a question of the royalties being high.

BY MR. FORSYTH: It is the pyramiding.

BY COMMISSIONER McLURIN: They are all free, white and twenty-one. They can make their own deal.

BY THE CHAIRMAN: No, but I don't think it is fair to the coal industry in that part of the country.

MR. MORRISON continues report:

Income taxes have been paid in the amount of \$74,613.69.

No subsidies have been received by this Company.

The sales summary discloses that the railways purchase about one-half of the screened and run-of-mine production and that the electric utility company purchases most of the slack coal produced.

1944 is the only year in which labor and shifts have been submitted. These are as follows:-

	<u>Force</u>	<u>Man-Shifts</u>
Surface Labor	34	9,065
Underground Labor	145	37,006

The tons per man raised for that year is 2.32 tons on a production of 106,950 long tons.

Standard Coal Company Ltd. - Amherst, N. S.

This Company has a capital stock of \$10,000.00, and the Balance Sheet sets forth assets as at the end of 1944 of \$38,040.98 gross value, and a net value of \$7,815.18.

Operations are carried out on a sub-lease from Victoria Coal Company, under a royalty agreement for 15 cents per ton in addition to the Government royalty of 12½ cents per ton.

The operating results 1940 to 1944 are as follows:-

<u>Year</u>	<u>Production Tonnage (Short)</u>	<u>Net Loss</u>
1940	39,549	\$ 3,022.94
1941	62,315	6,477.52
1942	73,990	15,125.78
1943	77,630	9,523.25
1944	72,499	3,122.64

Subsidies are included in the result for 1944 of \$14,165.58 which is in respect of 1943. 1944 subsidy received in 1945 is \$6,838.26.

BY COMMISSIONER McLURIN: I have given an expression of opinion of people that make their own leases. When they go to the Dominion Government for money, if I were paying out the money I would take into consideration the kind of misdeals they made as to royalties.

MR. MORRISON continues report:

Total costs in long tons are as follows:-

<u>Year</u>	<u>Long Tons</u>	<u>Cost</u>
1940	35,311	\$ 4.036
1941	55,640	4.312
1942	66,062	5.480
1943	69,312	4.537
1944	64,731	4.754

Sullivan Coal Company Ltd. - Sydney Mines, N. S.

This Company was formed in 1941 with a capital of \$4,000.00 to operate the Sullivan mine, which was formerly included in the operations of the Indian Cove Coal Company Ltd.

The results since its inception are tabulated as under:

<u>Year</u>	<u>Production Tonnage (Short)</u>	<u>Result</u>
1941	17,729	\$ 2,621.99
1942	16,764	117.46
1943	14,403	476.63
1944	11,535	-389.02

In 1944 subsidy has been received of \$8,566.37 and is included in the above result.

The total costs, including administration and directors' fees, are as follows:

<u>Year</u>	<u>Production Tonnage (Long)</u>	<u>Costs</u>
1941	15,829	\$ 4.05
1942	14,968	4.67
1943	12,860	4.82
1944	10,300	6.10

MR. MORRISON: That completes, Mr. Chairman, the summary of the various coal companies in Nova Scotia.

12.00 NOON - COMMISSION ADJOURNED UNTIL 2 P.M.

AFTERNOON SESSION

The Commission resumed at the Court House at 2.00 P.M.

BY MR. FRAWLEY: Mr. Chairman, I am going to defer any examination I may have, and I may have none, until other counsel have finished, and I understand Mr. Cohen is going first.

MR. COHEN: My Lord and members of the Commission, I wonder if I might make just a short reference first of all to a matter that came up this morning as a result of the presentation, as part of the evidence of Mr. Morrison, of two communications, each dated the 10th of September, one from Mr. McCall, general manager of the Dominion Coal Company, and the other from Mr. Gordon, president and general manager of the Acadia Coal. Now it is unfortunate perhaps that in some way it was not anticipated or foreseen that the Union would naturally be concerned with the representations here made and the statements contained in the letters. They are really submissions. That being so, and while I do understand that the Commission has a heavy program, I have been asked to state that we will find it necessary to ask that Mr. McCall, say, at the appropriate time-- I am not suggesting that we break in on this witness--be called, and that the Union be given an opportunity of presenting a reply to both documents filed this morning.

BY THE CHAIRMAN: I think that is only fair, Mr. Cohen.

BY MR. FRAWLEY: You mean that Mr. McCall should be simply offered for cross-examination on that letter?

BY MR. COHEN: Yes. It is called a letter, but I can't see, My Lord and members of the Commission ---

BY MR. FRAWLEY: It is an explanation.

BY THE CHAIRMAN: Would it be better if you submitted a reply in the same way, Mr. Cohen?

BY MR. COHEN: Yes, except that there are some statements and assertions here as to which it would be absolutely necessary, I do submit, to get from Mr. McCall the details. For instance, there is a suggestion with respect to these task jobs--somehow or other the copy of the letter that I saw was I think arranged

differently as to pages, so there is not much point in quoting the page--but as one reads that paragraph one might almost get the impression that that is a general situation with respect to the datal men, and the paragraph closes with a statement that the record of shifts paid for does not correspond to the actual number of shifts worked. Now that is something that goes very definitely to the point of production per man hour, because these figures have been divided by shifts, and no such distinction has ever been raised. I can't get the figures.

BY THE CHAIRMAN: Well, you will examine Mr. Morrison.

BY MR. COHEN: Yes, My Lord. I thought I should mention that at the earliest possible moment, and it arose out of the presentation of those letters this morning.

KENNETH J. MORRISON Sworn. Mr. Stewart Simpson also Sworn.

MR. COHEN proceeds to cross-examine Mr. Morrison.

Q Perhaps I should say that I am dealing firstly with Exhibit 204. That, I think, is the first report read into the record by Mr. Morrison this morning, and I have just a few questions in connection with that report. Firstly, Mr. Morrison, you indicate, beginning with page 3 of Exhibit 204 under the general heading "Expenditures, Capital or Operating", you indicate three, if I remember correctly, alternative methods of accounting?

A That is correct.

Q Or alternative accountancy practices?

A That's right.

Q One of those three really being a variation of another one. of the three?

A That is correct.

Q And I rather thought that the statement was made in court here earlier today by Mr. Forsyth that you had stated somewhere in your report--and I fail to find any such statement--that all of those methods had received the approval of accountancy experts. Now is that the case?

A I would say that all of those three methods are in operation

and have been approved by accountants.

Q Well, I think the term that was used this morning was "accountancy experts".

A Well, I would say professional accountants, if there is any distinction between that and accountancy experts.

Q Well, what were you saying?

A I said that those three methods or systems of accounting have been approved by professional accountants and accepted as such.

Q That is by accountants working for or supplying their services to particular companies following a particular accountancy method?

A That's right.

Q But not in theoretical works on the subject, or in any general discussion of what is appropriate or otherwise in respect to accountancy methods what can be said as to what approval, if any, is given to these alternative methods of accountancy practice?

A Well, I am speaking of course from the practical experience of meeting these in daily practice, not from the experience of reading a treatise on them by professional accountants.

Q Well then, from that standpoint what would you say is the generally accepted practice? I think you do somewhere indicate your opinion as to the practice followed, you say, by a number of coal companies in Canada?

A That's right.

Q Now when you say, by a number of coal companies, and you say there--that is on page 6--that they are following method No. 2, just what degree, what portion of the industry is following method No. 2?

A I would not be prepared to say what portion.

Q Well, perhaps I didn't make my question clear enough for you. You refer to your experience, "It has been our experience that Method No. 2 is followed by a number of coal companies in Canada."

A That's right.

Q Well, having regard to that experience, what can you tell us --

A Of the number?

Q Not so much the number of corporate entities as what they represent in terms of a particular proportion of the industry.

A Well, I have never analyzed it from that point of view.

Q Well, is it substantial?

A What?

Q The number of companies following Method No. 2?

A Well, I don't know what the proportion would represent when you compare it with the total, because you might have a large number of companies doing a relatively small business who might follow the one procedure, and one company doing much more business than all the others combined following another. I am wondering just where the proportion would be--the number or the tonnage?

Q I thought I made that clear. It would appear to me that the number of corporate entities would not get us anything. I am thinking in terms of tonnage.

A I wouldn't be prepared to say what amount of tonnage. I have never made an analysis of that kind.

Q Could you say whether it is substantial or not?

A For instance, I am thinking now of a company in Alberta which produces approximately a million tons per year which uses Method No. 2. Now there are other companies in Alberta which are using other methods. What their tonnage is I don't know.

Q And the conclusion you express, that Method No. 2 is preferable, is a conclusion you arrived at in your experience with companies using Method No. 2 and one of the other methods?

A Some of the other methods.

Q Your conclusion that Method No. 2 is the preferable method is arrived at on the basis of experience both with companies using Method No. 2 and with companies using one or the other of the two alternative methods?

A Of course in that respect one must take into consideration the purpose for which the statements are being prepared. We

are endeavoring to ascertain the average cost of producing a ton of coal in a year, and we are endeavoring to do that by spreading these costs over a period of time relative to the use in which the expenditures that are being made relate to the tonnage produced. Now you may have other considerations which would not be as important in determining a method of accountancy.

Q That seems to me to be fair enough. You might have situations in which the important factor was showing a particular profit at a particular time?

A Those all enter into it.

Q But from the standpoint of preparing a statement which will correctly analyze cost, Method No. 2, in your opinion and on the basis of your experience, Method No. 2 is the proper method?

A That is correct.

Q Now I don't think that there is anything further that I need bother you about with respect to Exhibit 204, except to call your attention to page 12 where you deal with the question of the basis of the price of coal, I take it, sold by the Dominion Coal Company to the Steel Division?

A Yes.

Q Incidentally, is that the terminology that is used in the books and the records?

A That is correct, the Steel Division.

Q And you first of all indicate at the top of that page the loss on sales to associated companies by the Dominion Coal Company?

A Yes.

Q Of \$7,674,675.74?

A That is correct.

Q Now over what period was that loss sustained?

A That is over the 15 year period under review, namely, 1930 to 1944.

Q That is the opening of 1930 to the end of 1944?

A That is correct.

Q And that is divided--\$7,584,623.04, Steel Division?

A That's right.

Q \$85,813.43, Seaboard Power?

A Yes.

Q And then two amounts to Eastern Car and Trenton Steel Works?

A That is correct.

Q And then you have two items for the Acadia Coal and the Old Sydney Collieries, and that brings the total loss computed by you on sales by Dominion Coal or by Acadia Coal or by Old Sydney Collieries to associated companies to a total of \$8,365,891.00?

A That is as computed by the company. We are merely reflecting to you the statements supplied to us by the company, which reflect those figures.

Q And their books carry these items and refer to them as losses?

A The statements that have been supplied to us.

Q Now in respect to that you then go on and say, "The basis of the price to the Steel Division appears to be on a comparison with prices obtainable on large contracts on the Montreal market."

A That is correct.

Q Now first of all, what do you mean by the term "appears to be"?

A I am reading from the document which was read into the record and which suggested to us that that was the basis for arriving at that price.

Q You say that has been read into the record? I was not in the courtroom at the time.

A There was a document read into the record which gives the basis of arriving at the price.

Q The details that support the allegation that the Steel Division price is related to the price obtainable on large contracts on the Montreal market, are the details in that?

A Have I details on that?

Q No, in this document that you speak of as read into the record?

A No, there are no particulars of the large contracts. Might I read just a sentence? "The committee reported that as the only market available for the coal used by the Steel Company, if that company was not operating, was the Montreal market and the price to the Steel Company should be based on the amount realized at the mines for coal of a similar quality supplied on large contracts in the Montreal market."

Q Well now, you opened by using the term "the committee". What committee?

A I have read from the document. I probably should read the whole of the document.

Q I don't want to bother you with reading the document if it is in the record. Do you mind if I glance at it? All I want to know is whether you have material, in that document or elsewhere, that will indicate whether or not, assuming that the Montreal figure is the correct standard to be used in determining the price to be paid by the Steel Division for coal, have you particulars that indicate just what those prices are?

A No.

Q Or what these contracts are?

A No.

Q Or who the customers are?

A No.

Q Or whether those customers may in turn be associated companies?

A When I say that, we have particulars in the statements which are in Exhibit A for Identification which will show certain sales to Montreal consumers. Now whether or not these are some of the consumers I don't know, but we can refer you to those, Mr. Cohen.

Q Perhaps you could later give us the number of the particular statement that you have in mind?

A If that is satisfactory we will be pleased to do it.

Q And are those prices laid down in Montreal?

A The prices that are shown are the prices at the mines.

Q At the mine?

A At the mine, after deducting the charges necessary to take it to market.

Q I think that we can for the moment leave Exhibit 204, Mr. Morrison, and I wonder if you could help me with respect to Exhibit No. 205. That is the next document that you read and I think the lengthier of the reports that you have filed. Now first of all you have a reference there to the stock issue when Dominion Coal was first incorporated, 30,000 8% Preferred Shares. Just as a matter of information, were they cumulative?

A No. Where they are not stated as being cumulative they will not be cumulative.

Q And on line 3 of page 2 you state as to the 5,000 preferred shares out of the original authorized issue, and that 10,000 were offered in 1900 at \$110.00. Now may we take that offer as being synonymous with a completed transaction?

A No, I would not say so. That is the information given to us as to the origin and early history of the company. We have no information and the records are not available to show that at that date, 1896.

Q Now similarly as to the statement, "In 1905. . . holders of the old issue had the option of exchanging share for share or turning them in at a redemption price of \$115.00 per share." Have you any particulars as to how many did so turn in their shares at that figure?

A No, we have not the particulars of the number, Mr. Cohen. This was merely intended to give the Commission the background, without particularizing as to details of the transactions leading up to the present condition of the company.

Q There was nothing critical implied in that question.

A Oh no, no.

Q Now you have the figure \$83.32 mentioned on page 3 as the average price received by the Dominion Coal per \$100.00 par, 6% Income Bonds, and elsewhere in the document it appears to me that referring to the same issue you give the figure at \$82.50. That is on page 5, 6% Income Bonds, 1912, issued to Dominion Steel for \$82.50.

A Well, apparently our original information stated that the amount was \$82.50 for each \$100.00. That was a memorandum; it is not dated. Then a later communication, August 15th, apparently changed the average price to \$83.32, so I would say that the price of \$83.32 was the correct figure. It doesn't affect the amount; it is merely a stating of the average price.

Q Well, it doesn't affect the gross amount of the indebtedness resulting from that disposition of those bonds. It does affect the actual amount that goes into the treasury of the company?

A That is correct.

Q And apparently \$83.32 is the correct figure?

A I think probably I can explain this so that there will be no question. The figure of \$82.50 appears to be the original price, and then there was discount and expenses added which changed it to \$83.32. We checked the particulars here. There was an issue of \$1,750,000.00 at \$82.50, and \$1,750,000.00 at \$85, and there were discount and expenses deducted, so that the average price was \$83.32.

Q Well now, I wonder if we can perhaps summarize the information contained in the first portion of your report as to the various issues, and particularly at the moment as to the amounts paid in connection with those issues, either by receiving less than the nominal amount of the security, or buying to be able to retire one, replace it and so on. Now as I understand it, you indicate that first of all in 1893 the corporation issued \$1,500,000.00 worth of bonds, 6% bonds, and sold them at 92?

A Yes. Well, might I suggest, Mr. Cohen, that it is summarized a little more on page 5. I am dealing with the bonds that you have named.

Q Yes, but I wanted you to verify the correctness of extending another set of figures than the figures that you have shown on page 5.

A Oh yes, I appreciate that. I was only suggesting you would get them all in chronological order for your bonds.

Q Well then, issuing that amount of bonds in 1893 at 92 in effect meant the payment of a premium of \$240,000. Am I right about that?

A The payment of a premium?

Q In effect?

A No.

Q Well, let me put it this way, that the company pays a discount?

A That's right, there was a discount of \$8.

BY MR. FORSYTH: But it is not \$240,000.

A \$120,000, is it not?

BY MR. COHEN: As a matter of fact I had \$120,000 in my own writing and somebody pencilled in \$240,000.

BY MR. FORSYTH: I didn't do that.

BY MR. COHEN: I am going back to my own figure.

A \$120,000, that's right.

Q And in 1893 to 1897 another issue of \$1,500,000.00 at 93?

A That's right.

Q Now that would involve a discount or premium of \$105,000?

A A discount I think is preferred, because that is what it is.

Q Well, it is a premium paid to the man who buys a bond, to buy it?

BY MR. FORSYTH: It is a premium paid to him when you redeem it.

BY MR. COHEN: I think you will find they have all been redeemed.

MR. MORRISON: If we are dealing with the company, the company received \$105,000 less on the sale of the bonds.

BY MR. COHEN: Than the indebtedness created by the bonds?

A That is correct.

Q I don't think you and I need get into any argument as to what term would best describe that. Now in 1905 you indicated that on the first \$1,500,000.00 bonds of a par value of \$100 were sold at 94. That is for every \$100 bond sold the company received only \$94?

A That's right.

Q And am I right in extending the calculation of \$300,000 as representing the difference between the indebtedness created and those bonds sold realizing only 94?

A That is correct.

Q Now in 1905 you indicate that the company redeemed outstanding bonds of the 1893 issue to the amount of \$2,435,000.00 and paid a 10% premium--I should think there could be no question about it being the appropriate term there--to those bondholders?

A Just where are you reading from now, Mr. Cohen?

Q I am reading from my own notes.

BY MR. FORSYTH: Bottom of page 2.

BY MR. COHEN: That is, they redeemed \$2,435,000.00 worth of bonds, and I take your language, "at a premium of 10 per cent"?

A That is correct.

Q So I take it it is clear that in addition to paying the \$2,435,000 there was paid the additional sum of \$243,500?

A That's right.

Q Now then, you show that during the years 1909 to 1911 \$2,000,000 more of the 1905 issue, or the issue authorized in 1905, was sold at par value less a discount of \$117,812.50, and that is shown on page 3, about the fifth line of the paragraph that opens-"Under the provisions ..."

A That's right, less a discount of \$117,812.50.

Q And then in 1912 we then have that issue of the 6% Income Bonds, is that it?

A Are you speaking of bonds now still?

Q Yes, I am still on bonds. By the Dominion Coal to the Dominion Steel?

A Yes.

Q And your text indicates that first of all there was the average price of \$83.32, but getting down to precise figures that the proceeds received by the company were \$2,916,205.69?

A That is correct.

Q Now am I correct in calculating that the difference between the \$3,500,000.00 6% Income Bonds indebtedness and the \$2,900,000.00 odd received is \$583,794.31?

A That is correct; represents the discount and expenses on that issue.

Q You mean the expenses of selling or disposing of the issue?

A That's right.

Q Well, have you any particulars at all that in any way apportion this sum of \$583,000 odd as between discount and selling expenses?

A No, we have no breakdown.

BY MR. FORSYTH: I wonder if my friend would mind when referring to that to use the words "Dominion Steel Corporation". We now talk about Dominion Steel in the sense of the present company. Dominion Steel Corporation is quite a different thing.

BY MR. COHEN: I appreciate that. I thought we were all referring to the present corporation as Dominion Steel and Coal, but if that will help make it clear I will be very glad to do that. Just one other item, still on the question of bonds. You indicate that in 1934--page 4 of your report--that the old preferred shareholders exchanged their former securities for new preferred shares, 7%. Is that right?

A That's right. Well, that is the old 7% preferred were exchanged for 6%.

Q And that amounted to \$3,000,000.00?

A Now these are shares we are speaking of now.

Q I appreciate that.

A I'm sorry.

Q Well now, leaving out for the moment this item of \$690,000, would you mind just checking the total of the six sums previously given in evidence as representing either the difference between the amount received on the sale of bond issues or amounts paid by way of premium to redeem bond issues, or discount?

A Now you mentioned six amounts?

Q All right, I would just like to check that with you.
\$120,000.00, \$105,000.00, \$300,000.00, \$243,500.00,
\$117,812.50 and \$583,794.31.

A Yes. It appears to be \$1,470,106.81.

Q Now still dealing with bonds, that would be the total amount involved in those premiums or discounts up to the year 1935, is that not right?

A That would be up to the year 1935? Well, up to the year 1934, I would think.

Q All right, we will take it at that. Now then, just two other items of bonds that I can find in your report, and the first is October 1937, \$6,000,000.00 sold at 96, is that right?

A That's right.

Q And the result of selling at 96 involves a discount of \$240,000.00?

A That's right.

Q Then in October 1939, \$1,500,000.00 first mortgage bonds are sold at \$96.65?

A Yes.

Q And is my calculation correct that the discount involved there is \$57,000.00?

A \$50,250.00, is that the figure you said?

Q I have here \$57,000.00.

A \$1,500,000.00 sold at \$96.65?

- Q Suppose we get that figure later?
- A No, we can get it now, Mr. Cohen. It is \$50,250.00.
- Q Now then, that gives us a total then after 1934 of \$290,250?
- A That's right.
- Q And if that is added to the discounts paid in connection with the earlier bond issues of \$1,470,106.81 what total do we get?
- A \$1,760,356.81.
- Q Now then, that completes the bond item, so far as I have been able to get particulars of it in your report, and if I may be permitted to say so, there is not a suggestion at all that the report is not complete enough. In fact, I think a word of commendation might be said. Now then, dealing with the share situation, you indicate that \$5,000,000.00 of the 1893 preferred share issue were sold at 91, is that right?
- A Reading from what page, Mr. Cohen, if you have it handy?
- Q Well, frankly, I am reading from a little table I made up myself, because I found that your report went on from bond to share, as properly it should do, because you were dealing with periods. 1893 would appear, I should think, at the top of page 2.

BY MR. FORSYTH: It says 5,000 shares were sold at 91 and 10,000 were offered at 110.

BY MR. COHEN: I am just asking about the 5,000.

A Were sold at 91, that's right.

Q Now, am I correct in arriving at the arithmetical conclusion that the discount involved on that transaction was \$450,000?

BY MR. FORSYTH: I don't see how it could be. Nine dollars a share would be \$45,000, wouldn't it?

BY MR. COHEN: \$45,000?

A That is the arithmetical calculation, but just a second, please, if I may; I want to be quite sure. Now the information from the company with regard to the 15,000 shares sold to the public: "While we are unable to check back to our official records destroyed by fire in 1911 as to the sale

price of the 15,000 preferred shares, it is gathered from the proceedings of meetings of directors held in 1896 and 1900 that 91 was received for 5,000 preferred shares sold in 1896 and that the 10,000 preferred shares were offered at \$110.00 cash in 1900." Now it would not be quite fair to assume that because these statements were made, those were the actual prices.

Q As I understand it, the statement is being made, based on some record in the minute book of the board of directors?

A That is true.

Q Well then, if we do permit ourselves to assume that that is a source that we can reasonably rely upon, then getting back again to the arithmetic of the thing, is the discount there involved on that 5,000 preferred share issue, is the discount \$45,000.00?

A Well, on that assumption of course the arithmetical calculation is correct, but I still think that qualification will have to be noted.

Q Now then, the next item is the shares in 1905.

BY MR. FORSYTH: Isn't it fair to put in the 10,000 at 110?

BY MR. COHEN: I asked about that, and I thought we were told that there was no information as to whether any offer was accepted.

BY MR. FORSYTH: That is not fair. Mr. Morrison said all the information he could get was some record of directors' meetings. If you are going to take one thing you should take the other.

BY MR. COHEN: I shall be very glad to include it, having in mind that one was sold, the other offered. Now that would involve, if in fact the offering had been accepted, a gain to the company of \$100,000.00?

A That is correct.

Q So at that stage we have a debit of \$45,000.00 and a credit of \$100,000.00?

A That's right.

Q Now, still on the stock issue, 1905, \$3,000,000.00 sold at 91?

A I take it you are dealing now with the item on the middle of page 2, probably, Mr. Cohen? Q. If you are referring to the paragraph opening "In 1893" that item deals with bonds.

A No, the paragraph opens with "In 1905", if that is the one you had in mind.

Q Oh, no, I am awfully sorry. I am referring to the one at the bottom of the page where you refer to \$5,000,000.00--well, here again we have bonds.

BY MR. FORSYTH: What you have got on the shares is right in the middle of the page, where we issued the shares at a premium of \$25 a share. That is what you are talking about.

BY MR. COHEN: Well now, did we in our previous calculations, when we dealt with bonds, include the bond item shown at the bottom of page 2, the \$5,000,000.00?

A Yes, I think so. I think we have exhausted them all. Where is the reference to \$3,000,000.00 at 91?

Q In the middle of page 2, starting in the fourth paragraph: "In 1905, the company issued 30,000 shares of 7%, cumulative, preferred stock, of a par value of \$100.00 each, for the purpose of retiring the 8% preferred issue then outstanding. Holders of the old issue had the option of exchanging share for share or turning them in at a redemption price of \$115.00 per share. The price to the public for the new issue was \$125.00 per share." First of all, can you tell us at all how many were turned in or how many were purchased by the public?

A No, we haven't that information. Mr. Cohen.

Q Because as to those turned in the company is paying a premium?

A That is correct; a redemption price of \$115.

Q Well, if you can't give us that figure, you can't. Now in 1934 the transaction takes place that you describe on page 4 and that I began to refer to earlier, and you indicate there

that the 7% security is being replaced by 6% security, first preferred?

A Right.

Q And that a total issue is made by the company of those preferred shares of \$6,000,000.00, made up of \$3,000,000.00 to retire or exchange for the old securities?

A Correct.

Q That was par value, I take it?

A Par value, yes.

Q And then, seemingly from the information here no interest had been paid on those preferred shares from the 31st of October, 1923 to the 31st of October, 1934?

A That is correct.

Q And you then calculate 11 years of interest at 7%, giving a total of \$2,310,000.00?

A Correct.

Q Then a bonus is paid to the holders of those preferred shares on which interest has not been paid for 11 years, a bonus is paid of \$690,000.00?

A Well, the bonus is consideration for the non-payment of interest over the period of 11 years, and for taking a bond of a smaller rate of interest, namely the 6% for the 7% bond.

BY MR. FORSYTH: It is not a bond, it is a share.

A I beg your pardon.

BY MR. COHEN: The net result is they were paid \$690,000.00?

BY MR. FORSYTH: Oh no.

BY MR. COHEN: Let me put it this way: They were given securities of a par value that included a \$690,000.00 bonus to the preferred shareholders who for 11 years had not been receiving interest?

BY MR. FRAWLEY: And for accepting security bearing a lower rate of interest.

BY MR. FORSYTH: Who used the word bonus here?

MR. MORRISON: We used it, but certainly not with any significance

as being anything other than recognition of the non-payment of interest on the due date and reduction in interest yield.

BY MR. FORSYTH: Did you calculate the interest on the \$2,211,000 over the 11 years?

A Not, but it is a very simple thing to do. If anything turns on it we would be very happy to do it.

Q I mean that is one of the things you were recognizing?

A Very true, and perhaps the use of the word bonus is unfortunate.

BY MR. COHEN: Well, whatever we call it there was the amount of \$690,000.00 included in the par value of these preferred shares then issued, over and above the par value of the former securities for which these were being issued in exchange, and over and above the accumulated interest of 11 years?

A That is correct.

Q I don't care whether you call it a bonus or not. Now then, would you just give us the arithmetical result if to the figure of \$1,760,356.81 we arrived at earlier with respect to the total of those premiums or discounts or whatever you care to call them, as to bonds, if we add to that total the sum of \$45,000.00 that you say is the discount resulting from the 1893 issue and the \$690,000.00 paid as you have described in your evidence and as indicated in part of page 4, now what is the total of those three figures?

A \$2,495,356.81.

Q And if we assume that the offering in 1900 of 10,000 preferred shares at 110 was accepted on that basis and in that amount by the public, then there would be a corresponding credit of \$100,000.00?

A That is correct.

Q Which would then give us the net figure of \$2,395,356.81?

A That is correct.

Q And without asking you to pass upon the matter in any way or express any opinion, that is the arithmetical result reached after totalling all of the discounts or premiums

paid in connection with bond or stock issues of those companies referred to by you in your report, isn't that right?

A I think so, Mr. Cohen, but I would like just an opportunity of checking them finally.

BY THE CHAIRMAN: Preferred stock issues.

A Yes, that would appear--that is the correct figure.

BY MR. COHEN: Now what was the career, so to speak, of the \$6,000,000.00 par value 6% preferred shares issued in 1934 in the way described by you in page 4? That is, what happened to that issue? Was it redeemed or replaced?

A On Statement No. 2 of Exhibit A for Identification you will find the particulars there, which shows that the preferred shares remained at the same value outstanding until 1937.

Q Oh, I see. You have the earlier years on the right hand sheet?

A Yes. So that there is the situation right up to 31st December, 1944, when they reduced to \$5,359,975.00.

Q The details are shown on page 6 of your report? And that arose out of the redemption or purchase of some of those preferred shares, is that right?

A You will notice \$401,200.00 owned by Dominion Steel and Coal Corporation Limited and \$4,958,775.00 owned by the public, which makes up the total on the balance sheet of \$5,359,975.00.

Q Now I take it that these preferred shares are redeemable?

A They are being redeemed, yes.

BY MR. FORSYTH: They are not only redeemable, but we are obliged to provide a sinking fund to redeem them.

BY MR. COHEN: I didn't know that.

BY MR. FORSYTH: I am telling you.

BY MR. COHEN: I am very pleased to hear it.

BY MR. FORSYTH: Well, express pleasure then. Don't snarl at me.

BY MR. COHEN: You indicate on page 6 that the \$3,000,000.00 worth of 3½% bonds which had been issued in October 1937 and due in 1943 were retired in full during the years 1938 to 1943. Now can you give us any breakdown of that retirement,

that is, how many in the year 1938 and 1939 and so on to 1943?

BY MR. FORSYTH: What page are you talking about now?

BY MR. COHEN: Page 6.

BY MR. FORSYTH: They were serial bonds. I think we retired them at the rate of \$500,000.00 a year.

MR. MORRISON: I was just trying to get those. From the balance sheet, Statement No. 2, the funded and mortgage debt--first mortgage bonds, I think those would be the both issues which includes the \$3,000,000.00 of Series A., are reduced--1937, \$6,000,000.00 was outstanding; 1938, reduced to \$5,500,000.00; 1939, it went up again by probably a further issue.

Q It goes up \$1,000,000.00 in 1939?

A Yes. I think that was dealt with at some other point.

BY MR. COHEN: But I am asking, if you don't mind, about the \$3,000,000.00 Series A. $3\frac{1}{2}\%$ bonds, and evidently the reference on Table 2, funded and mortgage debt, includes both Series A., maturing in October 1943, and Series A., $4\frac{1}{2}\%$, maturing in 1952.

BY MR. FORSYTH: If you will take my word for it, the first mortgage bonds were serial bonds issued in October 1937 and maturing in October 1943, and they were retired at the rate of half-a-million dollars a year over six years.

MR. MORRISON: That is correct. That statement will disclose that took into account, Mr. Cohen, an additional million issued in 1939.

BY MR. COHEN: And that is the issue that was sold for 96 in October 1937?

A That's right.

Q Now in addition to the retirement of the Series A. $3\frac{1}{2}\%$ bonds, was there any retirement during that period of the $4\frac{1}{2}\%$ bonds? Perhaps I can just indicate myself the answer to that. You indicate that in 1944 the $4\frac{1}{2}\%$ bonds were reduced by \$76,000? Is that it?

A That's right.

Q Leaving?

A \$4,424,000.00 outstanding, which is shown on Statement No. 2.

Q And that is the balance of the \$6,000,000.00, the two items of \$3,000,000.00 each issued in October 1937, the \$1,000,000. issued apparently in 1939 ---

A \$1,500,000.00, Mr. Cohen.

Q That is \$7,500,000.00. That is reduced, as of the 31st of December, 1944, to \$4,424,000.00?

A That is correct.

Q Well then, from that period, October 1937 to the end of 1944, what then was the total amount of bonded indebtedness retired or paid off by the company? It would be the difference, I take it, between \$7,500,000.00 and the \$4,424,000.00, is that right?

A That's right.

Q Well, may I just borrow enough of your skill to make sure of the result in arithmetic?

A \$3,076,000.00.

Q \$3,076,000.00 worth of the serial debenture bonds retired during the period 1937 to 1944?

A That's right.

Q And these debentures, that sold at 96 as indicated at the top of page 6, were used in part to retire earlier bonds then outstanding?

A Yes, that's right. The bonds sold at 96 and "the proceeds used to retire the 5% and 6% bonds outstanding which, at the end of 1936, stood at \$5,192,000.00, and for the purchase of the capital stock of the Cumberland Railway and Coal Company."

Q Now can you give us the total amount paid out by the company since 1937 up to the end of the year 1944 for the retirement or redemption or purchase, either of bonds or preferred shares?

A You have dealt with the bonds, Mr. Cohen. Now do you wish that repeated?

Q I just wanted the total that results from adding to the amount of bonded indebtedness retired the amount of preferred shares redeemed or purchased.

A Well now, on Statement No. 2 the preferred stock outstanding at the end of 1937 was \$6,000,000.00. I want to be quite sure there were no new issues meantime.

BY MR. FORSYTH: No, there were no new issues.

A And the amount outstanding at the 31st of December, 1944, is \$5,359,975.

BY MR. COHEN: Well, of course that deals with the par value situation. What I am trying to get at is the cash situation. I think that is indicated at the bottom of page 6, that is, that there was paid out during the year 1938 to 1944 to acquire preferred stock of a total par value of \$640,025.00 the sum of \$467,486.43?

A That's right.

Q What happens when we add the \$467,486.43 to the earlier figure of \$3,076,000.00?

A \$3,543,486.43.

Q In rough figures, \$3,500,000.00 of cash paid out by the company during the period 1937 to the end of 1944 in respect to retirement or purchase of bonds or preferred shares?

A That's right.

BY THE CHAIRMAN: There was no other issue in that time?

A That is what I was checking up. There were in connection with bonds. There was \$1,500,000.00 in 1939, but that was duly taken into consideration.

(Page 4110 follows)

Q. Just one question about the corporate set-up so-to-speak as indicated by you on page 6. You first of all show twelve million dollars of Common Stock held by Dominion Steel and Coal Corporation Limited?

A. Yes.

Q. Apportioned to Dosco to distinguish the record from the former corporation?

A. Yes.

Q. When were those issued and is there anything in your material that indicates the consideration received by the Company for that twelve million dollars of Common Stock?

A. Well on page 5, Mr. Cohen, we show that in 1893 there was issued for the properties \$15,000,000.00 for the Common Shares, which we described on the first page, and then those were in 1934 exchanged for the new issue of \$12,000,000.00 which is the amount presently outstanding. That was dealt with on page 3. "On October 1st, 1934, a compromise arrangement was made with the holders of the preferred and common stock".

Q. That was a compromise that we dealt with before that included the \$690,000.00 and the 11 years interest?

A. No, this is entirely different. Perhaps I should have read the whole of it. "On October 1st, 1934, a compromise arrangement was made with the holders of the preferred and common stock, and approved by the Supreme Court of Nova Scotia, whereby the outstanding capital stock, consisting of:-

30,000 Shares	7% Cumulative Preferred of	
	\$100.00 each	\$3,000,000.00
150,000 "	Common, of \$100.00 each	15,000,000.00
		<u>\$18,000,000.00</u>

was changed into:-

400,000 Shares	6% Cumulative Preferred of	
	\$25.00 each	\$10,000,000.00
480,000 "	Common, of \$25.00 each	12,000,000.00
		<u>\$22,000,000.00</u>

Then dealing with the Common only, of which were issued, as explained below:-

480,000 Shares Common, of \$25.00 each..\$12,000,000.00
still outstanding.

BY MR. FORSYTHE - It left the nominal capital at just what it was before the compromise.

A. Yes.

EXM. BY MR. COHEN (continued)

Q. It increased the indebtedness in the form of Preferred Shares and decreased the amount of Common Stock holdings.

A. It decreased the indebtedness to the common shares.

Q. If you regard preferred shares at all in the category of indebtedness. It increased the preferred shares by the amount of three million dollars, and reduce the Common correspondingly by the amount of three million?

A. That is right.

BY MR. FORSYTHE - That is not quite right. The compromise or arrangement really increased the total authorized capital stock of the Company, did it not, to \$22,000,000.00?

A. Yes.

Q. But the results after you issued the preferred stock and common stock, you had the same nominal capital as before except the three million of Common became three million of Preferred?

EXM. BY MR. COHEN (continued)

Q. That is what I said. The Capital remained at \$18,000,000.00?

A. That is right.

Q. Whereas, before it was \$3,000,000.00 Preferred and \$15,000,000.00 Common, after the compromise that you speak of that appears as Six Million Preferred and Twelve Million Common?

A. That is correct, as detailed on page 4.

Q. So that means that Three Million Dollars of Common Shares found themselves in the position of holding Preferred Shares?

BY MR. FORSYTHE - Oh no. I want to explain this thing. The common shareholders gave up in share capital Three Million, and instead of holding Fifteen Million of Common, they held Twelve Million. And the Preferred shareholders had of preferred indebtedness instead of the Three Million they had before. The Common Shareholders didn't change their common stock into preferred stock. Dominion Steel & Coal surrendered Three Million

Dollars of their Common Stock unto the Company. They didn't gain any of the advantage of being put in the preferred class.

BY MR. COHEN - But there is no suggestion for the additional three million preferred shares being issued, of some new money coming into the corporation.

BY MR. FORSYTHE - You will see where they issued the Six Million of Preferred for the old preferred shares.

BY MR. MORRISON - The Common were reduced from Fifteen Million to Twelve Million, and the Preferred were increased from Three Million to Six Million.

EXM. BY MR. COHEN (continued)

Q. You are talking in terms of Dollars?

A. Yes, and details of the Preferred Shareholders exchange is one we have gone into, and now you ask about the Common, and one is complementary to the other in so far as the total is concerned.

Q. In what way were they complementary or associated with each other as to the people who held them?

A. Not as to the people who held them. I was speaking of the capital indebtedness of the Company by way of Preferred and Common shares still remaining at Eighteen Million.

Q. And no suggestion that the new preferred shares, you had new preferred shares at that point to the amount of \$3,000,000.00 par value, no suggestion that that brought new money into the treasury?

A. Oh no.

A. That would retire the old common shares? The Company was not just issuing \$3,000,000.00 of Preference Shares without some consideration?

BY MR. FORSYTHE - Would you allow me to explain this, because we will save a lot of time. Mr. Morrison was not there, and I was. We had Preferred Shareholders holding holding \$3,000,000.00 in par value of preferred stock, who had received no dividend for 11 years. We wanted to reduce the interest rate and rid the company of this overhanging contingent liability of 77% of accumulated

dividends. So the Dominion Steel Corporation, which held \$15,000,000.00 par value common shares said we will reduce that \$15,000,000.00 to \$12,000,000.00 and we will increase the number of preferred shares to a par value of \$10,000,000.00. And that was done. Then we gave to the old preferred shareholders who held \$3,000,000.00, \$6,000,000.00 of that new preferred. There was an increase in the authorized capital of \$4,000,000.00. So we gave the \$6,000,000.00 as is shown on page 4, \$3,000,000.00 for their previous par holdings, \$2,310,000.00 (I am using Mr. Morrison's figures, but not saying that I agree with them), and \$690,000.00 for the other considerations that are mentioned, and that gave them \$6,000,000.00, and when the smoke cleared away preferred shareholders held of the outstanding capital of the company \$6,000,000.00 in par value, and the common shareholders had \$12,000,000.00 in par value. So on the Winding-up Dominion Steel & Coal would receive \$3,000,000.00 less than they would previously receive, and the holders of preference shares would receive \$3,000,000.00 more, on a Winding-up position.

BY COMMISSIONER McLAURIN - This was done under those sections of The Companies Act?

A. We have a local Statute in Nova Scotia similar to the Dominion Statute, and the Court approved it, and the shareholders voted for it.

BY MR. COHEN - I think that clears the situation up, does it not Mr. Morrison?

BY MR. MORRISON - Yes, Mr. Forsythe is familiar with all the background of it.

BY MR. FORSYTHE - Intimate is a better word than familiar.

EXM. BY MR. COHEN (continued)

Q. Tell me something of the rights that go with the preferred stock which you indicate as \$401,000 by Dosco and some \$5,000,000.00 by the public. Any voting rights?

A. I have not particulars of the rights attached to it, unless we have them in some of the material supplied by the Company.

Q. When you get a moment with Mr. Forsythe perhaps you would

draw on his knowledge and get that.

A. If you wish it we will certainly get it.

Q. And could you also get for us the date when Dominion Steel & Coal Corporation acquired the Common Stock of Dominion Coal Company Limited, which I think perhaps might be made clear at this moment as the Company we have been dealing with.

BY MR. FORSYTHE - Which one is the one we have been dealing with?

BY MR. COHEN - Dominion Coal.

BY MR. FORSYTHE - I will get that.

EXM. BY MR. COHEN (continued)

Q. Now you indicate in your report that anything made by, or any loss suffered by the Sydney & Louisburg Railway Co. is treated as part of the operating cost of the Dominion Coal Co.?

A. That is right.

Q. And then you indicate that in the course of that there is a diminution of revenue of the Sydney & Louisburg Railway Company arising out of the fact that it transports for the Steel Division at less than the tariff rates?

A. It is not a diminution of revenue for the railway, they get the full tariff, but it is paid partly by Dosco and partly by the Dominion Coal.

Q. What do you mean by partly by Dosco?

A. Under the Agreement which was referred to in the evidence yesterday.

Q. Do you mean partly by the Steel Division?

A. Yes.

BY MR. FORSYTHE - I don't know who uses that expression, whether the Company, or the Accountants, or my learned friend. But there is no Steel Division of the Dominion Coal Company. The Dominion Steel & Coal Corporation owns and operates the Steel Plant. It is not a division of the Dominion Coal Company and everybody knows it.

BY THE CHAIRMAN - He was talking of it, I think, as a division of the Dominion Iron & Steel.

BY MR. FORSYTHE - I don't think we should confuse those.

EXM. BY MR. COHEN (continued)

Q. I am referring to it as the Steel Division of Dosco. What do you say is the loss, or penalty, or burden that the Dominion Coal Company is under as a result of the fact that the Sydney & Louisburg Railway Company transports goods for the Steel Division of Dosco?

A. In Exhibit 204, on page 13, we point out - "On page 29 of our explanatory report on Dominion Coal Company, it will be noted that the Dominion Company suffered charges aggregating \$86,907.69 in respect of the above tariff differential."

Q. Suffered charges in relation to what period?

A. For the period 1942, 1943 and 1944, which are dealt with and mentioned on page 29 on Exhibit No. 205. The years are indicated there. \$23,589.19 for 1942, \$62,476.27 for 1943, and \$842.23 for 1944.

Q. That makes up the \$86,907.69 referred to on page 13 of Exhibit 204?

A. That is correct.

Q. Have you the particulars of similar payments made by Dominion Coal to Sydney & Louisburg Railway Company for any earlier years in respect to goods transported for the Steel Division of Dosco?

A. There are no amounts in the period covered by us, from 1935 to 1944.

Q. I don't quite follow you when you say that?

A. Statement No. 1 of Dominion Coal under "Miscellaneous 1". This does not cover the whole period, so in order to answer your question going back to 1930 we would have to get the breakdown of the miscellaneous charges in Mining Costs for all of the years, so I am not able to answer specifically at the moment, but the \$86,907.69 refers to the years 1942, 1943 and 1944, and there were no charges for the years 1939, 1940 or 1941. Whether there were charges prior to that we would have to make enquiry.

Q. If it is not too much trouble will you see if you can do that.

BY MR. FRAWLEY - Taking the years where there are no charges, does that indicate that during that time the tariff rate was charged to Dosco in accordance with the Agreement?

A. We can ascertain that, and also get the information for Mr. Cohen.

EXM. BY MR. COHEN (continued)

Q. Dealing with the statement which starts at the bottom of page 9 and goes on to page 10, the Balance Sheets, and first of all dealing with the question of Assets, can you tell us what the Demand Loan is that for instance was outstanding at the 31st December, 1939, \$725,000.00?

A. I am just trying to locate your figure.

Q. Page 10 of Exhibit 205 under the column "31st December 1939" opposite "Demand Loan", one of the assets.

A. Yes, \$725,000.00.

Q. There are no particulars on the Balance Sheet. Will you see if you can get that for us, if it is not too much trouble. Now then the third item, two items below that, "Accounts Receivable less Reserve"?

A. Yes.

Q. And I am taking the position as of the 31st December 1944 when you show Accounts Receivable aggregating to \$11,078,135.19.

A. That is right.

Q. What is the amount of the reserve?

A. If you will turn to Exhibit "A" for identification, to Schedule 3 under Balance Sheets, you will find the particulars there, and the reserve for Bad Debts as at that date is \$266,383.51.

Q. Just indicate to me if you don't mind where on that page that appears.

A. The very last column under "Total" that is the reserve in respect to Trade Accounts, and if you follow that column down you will find \$7,897,807.65 against which there is a provision for Bad Debts \$123,783.98.

Q. So the total of the two items with respect to the outstanding Accounts Receivable of - still the Dominion Coal which we are

dealing with?

A. Yes.

Q. The total amount is \$390,167.49.

A. Let me correct that, Mr. Cohen. You will notice that there is C. B. Mines shown on the first column of Schedule 3, Cumberland Railway & Coal, and Sydney & Louisburg Railway.

Q. Then one would have to deduct from those totals first of all the amount of \$49,215.51, the Bad Debt reserve for so-called Trade Accounts for Cumberland Railway & Coal Company?

A. You would get the figure of \$270,168 shown under the appropriate column of Cape Breton Mines.

Q. I thought you said Cape Breton and Sydney?

A. No, Cape Breton Mines only.

Q. Then what do you say is the total?

A. Bad Debts \$217,168 in respect to accounts aggregating \$3,195,056.59. And then for other accounts, total accounts \$6,563,015.33 and the reserve for Bad Debts \$123,783.98.

Q. Would you mind giving us the combined total of the Accounts Receivable shown under Other Accounts - The Emergency Coal Production Board subsidy \$5,813,817.50, Emergency Coal Production Board levelling \$124,692.69. Department of Mines & Resources excess freight costs \$208,509.89, National Harvest Board \$31,696.42, Canadian National Railways \$33,347.19, Ministry of War Transport handling bunker coal \$96,385.45, and I think perhaps we could include as an equally realiable debtor the Province of Nova Scotia \$76,612.84 - what is the total of those items?

A. The total is \$6,385,061.98.

Q. Now then deduct that figure that you have just given of the total of the Accounts Receivable of these particular Government and similar agencies, from the total Accounts Receivable which is given here as \$6,563,015.33.

A. And the answer is \$177,953.35.

Q. If one may assume, and I am not asking you to agree or disagree, if one may assume that as to the items which I first brought to your attention and which totalled the figure you gave us of some

Six Million Dollars and more, the net result is that with respect to the remainder, which you said was how much?

A. You mean the accounts, \$177,953.35.

BY MR. FORSYTHE - Excuse me one minute. You have a figure here on page 10 of Accounts Receivable of Eleven Million odd dollars.

A. That is the net figure, Mr. Forsythe.

Q. And on that you have a reserve of Three hundred and ninety odd thousand?

A. The reserve as against that total, \$390,000 approximately.

Q. So we will say \$11,450,000.00 in round figures?

A. Yes, the gross amount.

Q. My friend suggests that you should deduct such accounts as the Emergency Fuel Board and the rest he mentioned..

A. I am making a mathematical calculation, that is all.

EXM. BY MR. COHEN (continued)

Q. Does the Company divide those into Trade Accounts and allow as to those this reserve of \$217,000 odd, and divide the other into Other Accounts and allow as to them this reserve of \$123,783.96?

A. Yes, but all of those accounts, the Six Million Five Hundred Thousand of them.

Q. I indicated the presumption upon which I was proceeding and indicated that I was not asking you to agree with it or otherwise, and I say if one assumed that there is no credit risk with respect to the accounts I listed for you, and which added up to some Six Million, if one is correct in that, then the net result is, you provide for a net reserve \$123,783 for Accounts Receivable of \$177,000?

A. If you assume all of those things.

Q. Just one assumption I have asked for.

A. There are a lot of assumptions there.

BY MR. FORSYTHE - I don't think that can be correct. Have you not Five Million Dollars left?

EXM. BY MR. COHEN (continued)

Q. I will go on and deal with the Trade Accounts.

A. We dealt with them as a separate item.

Q. Have you dealt with these accounts as to dividing them, and as to these separate divisions, any different from the way the Company deals with them?

A. No.

Q. Then as to the Trade Accounts aggregating \$3,195,056.59?

A. Yes.

Q. And as to which you allow a reserve for bad debts of \$217.168?

A. Yes.

Q. Have you any particulars as to how each of those accounts is owing to the Dominion Coal Company by any subsidiary of Dosco if I may use the abbreviated term, or any other company associated with Dosco?

A. I would think there are no amounts included in these Trade Accounts for associated companies. Any balances owing by associated companies are shown on page 9 of your Balance Sheet under "Balances Receivable from Associated Companies" as of 31st December 1944, aggregating \$468,672.31.

Q. As of what period?

A. The same date as we were using before, 31st December 1944.

Q. And do you know, or are you just suggesting as a matter of inference, that the items shown as say inter-company indebtedness, have nothing to do with Trade Accounts?

A. By a matter of inference. It can be checked for you.

Q. Do you mind?

A. No, we can easily get the information as to whether any inter-company accounts are included in Trade Accounts.

Q. What did you say the inter-company account was at that period?

A. At the bottom of page 9, "Balance Receivable from Associated Companies".

Q. Is there anything in the nature of a reserve account set up with respect to Bad Debts? Or just a separate calculation made at the end of each year?

A. As to the procedure?

Q. Yes?

Q. I think we have dealt with the reserve for bad debts. We have dealt with most of the reserves. No, we do not appear to have the particulars.

Q. Can you find that out for us; whether there is a reserve account maintained for bad debts, or whether they just annually make a calculation of what is to be deducted.

A. I would say definitely there is an account set up for bad debts, a reserve, and we will get the particulars. Would it be as at the end of December 1944?

Q. If it is an account that has built itself up over a period of time, I would like to see the build-up.

A. We will go over the fifteen years.

Q. In the next column you have \$354,800.00. What is that? It is an asset of the Dominion Coal Company Limited.

A. On Schedule No. 4 Mr. Cohen, under Balance Sheets.

Q. And that indicates that these Investments are made up \$293.350, 6 $\frac{1}{2}$ %.

A. 6 $\frac{1}{2}$ % in my copy.

Q. My copy may have that too, but it is a little blurred. I was giving you the figures, not the rate. \$293,350 of the total Investment item is made up of 6 $\frac{1}{2}$ % Dosco Cumulative Participating Registered Income Bonds?

A. That is right.

Q. \$24,750 Glace Bay General Hospital Bonds?

A. Right.

Q. \$8,000 Dominion of Canada, and \$2,000 again Dominion of Canada?

A. Yes.

Q. \$25,600, Glace Bay Hotel stock?

A. Yes.

Q. What is the Glace Bay Hotel stock, is there a hotel of that name?

A. Yes.

Q. And \$500. Glace Bay Forum and \$600. Empire Housing Company. That makes up the total of \$354,800.?

A. That is right.

Q. Now dealing with one or two of the liabilities of that statement. What is the Bank or Banks to which the \$7,800,000.00

is owing as of 31st December, 1944?

A. Do you mean the names of the banks.

Q. Yes, I don't know how to describe a bank except by name.

A. We have not got that.

BY MR. FORSYTHE - I would like to know the relevance of that. The Royal Commission has a task to investigate the coal industry, but I am wondering what possible relevance the name of the Bank that makes a loan to the Dominion Coal Company can possibly add to that task.

BY MR. COHEN - I have in mind the situation discussed at Trenton where there was an agreement between the Company or Companies involved and two banks as to how the business of the company was to be distributed, and so on.

BY MR. FORSYTHE - Is there anything sinister in that.

MR. COHEN - I don't know.

MR. FORSYTHE - I am suggesting that it has nothing to do with this inquiry.

BY THE CHAIRMAN - So long as you deal with banks that are sound.

MR. FORSYTHE - I don't know as it makes any difference when we are borrowing from them.

EXM. OF MR. MORRISON BY MR. COHEN (continued)

Q. Do you know anything about the interest rate?

A. No sir.

MR. FORSYTHE - It is the lowest we can get, I will tell you that.

EXM. BY MR. COHEN (continued)

Q. You indicate at the bottom of page 10 a total of reserves of \$3,594,134.55, and a total of \$2,058,144.66 attributed to Surplus, and both figures as of 31st December, 1944.

A. Yes.

Q. What is the total of those two figures, so that we have it conveniently before us on the record?

A. \$5,652,279.21.

Q. Now then can you tell me what accounts for the increase of the balance or the amount in the surplus account, which is given at the period 31st December, 1939, at \$923,256.20, and is shown to be at the end of December 1944 \$2,058,144.66. Can you trace that?

A. I think we could by referring to the Profit and Loss Statement.

Q. First of all there is a growth in the Surplus Account during that five year period, of the difference between the Two Million odd Dollars figure and the smaller figure of \$923,000 odd, and what is the amount of that increase?

A. You mean the difference?

Q. Call it the difference then. It seems to me that the larger figure necessarily indicated that there had been an increase in the Surplus Account.

A. Well now, first by reference to statement No. 2, which is the Balance Sheet of the Dominion Coal and subsidiary companies, which is the same statement that we were discussing on page 10, you will see that in 1939 the surplus account was the figure of \$923,256.20, and then it went up to \$1,181,456.19, and in 1941 reduced to \$450,431.97; increased in 1942 to \$920,050.33, and in 1943 \$1,195,347.67, and in 1944 \$2,058,144.66. That is the progress of the Surplus Account.

BY MR. FORSYTHE - Is it not fair to state that you are tossing the ball in the air. Until you find out what the Emergency Fuel Production Board will pay on these claims these figures don't mean anything.

MR. MORRISON - For the years 1943 and 1944. And if you take your surplus in 1942 when it was \$920,000.00 odd, then you have something that you can tie to, because at least it was something that was established.

BY MR. COHEN - These figures are based on the Company's records of the Accounts Receivable.

BY MR. FRAWLEY - They are the Company's figures.

MR. COHEN - And I have merely asked the witness to indicate the growth so-to-speak, or the change if you like, of the figure \$923,000 as at the end of 1939 to the \$2,000,000.00 figure as at the end of 1944, and the witness has given us that.

BY THE CHAIRMAN - I don't understand your answer Mr. Morrison, about this progressive business. The surplus of the Company in 1939 is \$923,256.20.

A. As at that date Sir.

Q. And then it was increased gradually?

A. That is correct.

Q. Until 1944 when it became \$2,058,144.36.

A. There was one decrease.

BY MR. FORSYTHE - The fact of the matter is that in 1942 if this \$923,266.20 is correct it was still \$3,000 less. The point I am making is this. What we have here, this Company has never been able to publish an audited balance sheet because it has not been able to get a determination of the outcome of its claims against the Emergency Fuel Production Board for 1943 and 1944. What I am objecting to is being published about surplus and earnings, when they are not correct statements.

BY MR. COHEN - My friend cannot say they are not.

MR. FORSYTHE - I can. I have a statement of profit this morning showing \$700,000. I know it includes a depreciated figure of \$300,000, and I know under the Fuel Board I can't get more than 15¢ a ton.

BY THE CHAIRMAN - But they are figures given by you.

MR. FORSYTHE - Yes, as the figures on my books, but that profit figure I don't get.

Q. On the assumption that you will some day or other get this from the Emergency Fuel Production Board.

A. I object to having this Company's accounts discussed publicly on a basis that is not ascertained. This morning there is a statement in the press that this company's operations have been subsidized to the extent of some millions. Can that be said to be true until the subsidy is paid? I am perfectly willing to discuss these figures on the basis of any assumption you like.

THE CHAIRMAN - That is the assumption we are discussing them on.

MR. FORSYTHE - We are discussing them on the basis of that assumption and we understand it, but the headline in the press didn't give that indication.

Q. You should have the press ousted from the court.

A. I should not.

Q. You should have brought it to our attention earlier.

A. I brought it to the attention of this Board last January, as Mr. Frawley knows.

BY MR. FRAWLEY - When we began the examination of Mr. Morrison we made it clear that there was to be no disclosure outside, of such things as selling prices, because that would not be to the benefit of the inside management or labor. It is quite true that from Mr. Morrison's statement the subsidy claim appears and the press has made a headline out of it. I would put it to my friend, how else could Mr. Morrison have done the job which the Commission gave him to do except by putting up the figures he has.

BY THE CHAIRMAN - I think it is a splendid answer to the appeal for nationalization, a splendid defence.

MR. FORSYTHE - Let us get one thing very straight. I have not complained about what Mr. Morrison has done. Obviously he can't try to guess any more than anyone else can guess. He took records as he found them and put them forward. But some of them I will have to criticize, but this business of saying you have a surplus of so much, when you have not got it.

BY THE CHAIRMAN - To be frank about the matter, Mr. Morrison got those figures from you, they are the surplus you anticipated. Why should you object to Mr. Morrison's using them?

A. I am not.

Q. You are objecting to the newspapers using them.

A. I am objecting to the statement that these surpluses represent the actual position of this company today.

Q. That is the position we are going on. That is something that will be certified or uncertified in the future when you have a settlement with the Emergency/^{Fuel} Production Board.

MR. MORRISON - When I made out my report I said that the above summary includes claims for assistance to the Emergency Fuel Production Board, all of which have not been finally settled.

MR. COHEN - My friend has not hesitated to use these figures for determining costs, and there was no hesitation then about using these figures for a basis.

MR. FORSYTHE - They have nothing to do with cost at all.

EXM. BY MR. COHEN (continued)

Q. Now you indicate on page 11, first of all the fact that there was some contention about the claim to the Emergency Fuel Production Board, and then on page 12, what was the statement you just read:

A. On page 11, I had forgotten I had repeated that very observation - "The Balance Sheets as at 31st December, 1943 and 1944 are still tentative, depending on the claim of the company for assistance from the Emergency Coal Production Board being accepted by that body." I felt that I had certainly qualified to every extent.

Q. Just refer me if you don't mind. The last sentence on page 12?

A. Yes.

Q. What do you mean when you say "all of which have not been finally settled"? Do you mean that all of the claims are still outstanding, or that one can say that all of them have not been settled?

A. On page 13 the amounts are stated; for 1942, \$1,398,325.88; for 1943, \$3,599,515.38, and for 1944, \$6,250,036.39, aggregating \$11,247,877.65, the amount of the claims made by the company to the Emergency Coal Production Board, and we say "all of these have not been finally settled". Some of them may have been. The year 1942 may have been settled, but we are informed that all of them have not been settled.

Q. Can you ascertain for us how much of the total of the figure shown in the Accounts Receivable, Schedule under "C" Accounts - you remember there were two figures?

A. Yes.

Q. Against the Emergency Coal Production Board, Schedule 3; can you ascertain for us as to the first figure of Five Million Eight Hundred Thousand odd, or as to the next figure of \$124,692.69, how much of either of those figures has been settled between the Company and representatives of the Board?

A. I don't know, Mr. Cohen.

Q. I appreciate that. I was asking if you could ascertain that for us?

Q. I beg your pardon. I will make a request from the Company as to the particulars of what the position is, and submit it to the Commission, if that is the desire of the Commission.

BY MR. FORSYTHE - Have you similar figures for 1943 here on the Accounts Receivable?

A. No, I think not.

EXAM. BY MR. COHEN (continued)

Q. As I understand it you do later in detail deal with each one of the subjects set forth in Schedules 1 to 6 that you describe on page 11?

A. Well we deal with some of them.

Q. With some of the details?

A. Yes.

Q. Then I can deal with that when I come to that portion of your report, Exhibit 205.

A. It follows right on, Schedule 1 - Summary of Fixed Assets and Depreciation as at 31st December. If there is something you would like to discuss there, I think probably now would be the appropriate time.

Q. No, there is not anything in connection with that item.

A. And so on down the line.

Q. The next item is Inventories?

A. Yes.

Q. And you show that for the years 1930 to 1935 there has been an annual depreciation allowed of \$730,000 for the year 1936?

A. Just a moment Mr. Cohen. That is not in connection with Inventories.

Q. I am sorry, I didn't intend to say Inventories. I was thinking in terms of Properties.

A. You mentioned Inventories.

Q. I am very sorry. I associated that portion of page 11 with Item No. 2, Schedule No. 2. I can see now how the term was used. I am asking now with respect to the amounts you show for allowed depreciation; that is depreciation generally with respect to the fixed assets of the Company?

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A. That is right:

Q. From 1930 to 1935 the allowance was \$730,000 each year; in 1936 \$900,833.28; in 1937 \$1,077,000; in 1938 \$824,000, and in 1939 and 1940 \$1,250,000, and in 1941 nil, and in 1942 to 1944 \$1,250,000 allowed for depreciation. Is there any place in Exhibit "A" where we can get at the total of these depreciation allowances for the years 1930 to 1944 inclusive?

A. I think it could be gotten by totalling them up.

Q. I thought you might have it in one of the Schedules?

A. You will have to look in the Profit and Loss statements. Under statement No. 11, that is under Profit and Loss, that goes for the years 1930 to 1935. We will have to give you the individual companies, Mr. Cohen.

Q. What do you mean by that? We are dealing with Dominion Coal?

A. Yes, but this is Dominion Coal and subsidiaries \$1,250,000.

You will notice we say "The Dominion Coal and Subsidiaries provides an annual fixed amount for depreciation" which in 1942 to 1944 was \$1,250,000. In order to get that figure we would have to add the individual amounts for each company.

Q. Perhaps you could do that and have it put on the record.

A. That is the total amount of depreciation, just for depreciation over the whole period?

Q. For the period 1930 to 1944 inclusive.

A. For all Dominion and Associated Companies, or these three companies we are dealing with now?

Q. For the companies in respect to which \$1,250,000 was set aside annually as a depreciation allowance in the years 1942 to 1944.

A. Yes, we understand.

Q. Can you at the same time ascertain the reason for the particular amount of the depreciation allowance in the year 1900?

A. I wonder if it would be of any help to refer to page 23 of Exhibit 204. We break down there the particulars of the charge for 1944. I am not quite sure just what you have in mind, but that might be of some assistance to you. It shows the breakdown of the \$1,250,000, divided into Depreciation \$1,058,853.08, and Depletion \$191,142.92.

Q. I see this statement on page 23 of Exhibit 204, but if it is not troubling you too much I would like the computation or calculation that I asked for earlier. Assuming there are no additions to Capital of this kind of property, and assuming depreciation at the average rate at which depreciation has been allowed say during the course of the last six years, or if you like, 10 years, whichever seems to be a more reasonable period to secure an average from, how many years will it take for the whole of the assets of these particular companies to be fully paid for, or allowed for, in depreciation?

A. The answer is on page 24 of Exhibit 204. That was put into the record yesterday where we pointed out that - "The gross book value of the depreciable assets of Dominion Coal and subsidiaries, after eliminating obsolete and fully depreciated assets, amounted to \$22,472,070.74 as at 31st December, 1944. The total depreciation for the year as recorded in the property ledgers of the Company was \$1,058,853.08 or 4.7% of the gross value. As at 31st December, 1944, the reserve set up against the depreciable assets of \$22,472,070.74 was \$12,295,417.33 or 54.7%. On the present basis of depreciation, the depreciable assets, viz. Plant, Equipment and Development, will be fully written off in a further 9.7 years. The rates of depreciation adopted by the Company are not in excess of those allowed by the Dominion Income Tax Division."

Q. Thank you very much, that answers the question I was addressing to you. Now would you mind for a moment or two, with respect to page 12. First of all the figures in column 1 indicate Book Value. Did you go back at all to the source of those figures?

A. No.

Q. Or did you accept them as of a given date?

A. We have accepted them as shown by the books.

Q. At what year? What was your starting point?

A. These figures are as at 31st December, 1944. The starting point would be 1895 I guess.

Q. How many years back did you find that the book value of "Coal

"Areas, Dominion" was being carried say at the figure shown here \$15,111,598.24. Perhaps I should not deal with that because that is a non-depreciable item. Take any of your depreciable items, when did these book value figures originate?

A. 1895. This is the cumulative result up to December 1944, and as this company has been in existence all these years there will be figures there going back to the inception of the company.

Q. How far did you go back?

A. To 1930 for statements, but that has no relation as to how far these figures go back.

Q. It would have this relation, that you could tell us how much of the total book value of \$48,096,438.45 originated in the periods 1930 to 1944.

A. We have given you a statement of the capital expenditures made in that period and regarded by the company as such, and that also was in Exhibit 204 at page 13 and page 14. We point out that - "For the purpose of comparison, we submit hereunder the expenditures made during the fifteen year period under review, which amounts have been classified by the Companies as Capital." And the various companies are Dominion Coal, Dominion Utilities, S. & L. Railway, Cumberland Railway & Coal, Acadia Coal and Old Sydney Collieries, and the amount is \$4,927,774.28. And Schedule in Exhibit "A" for identification, gives you all of the details showing the additions year by year.

Q. During the period 1930 to 1944, and bringing us to the total of Five Million Dollars odd, which you indicate on page 14 of Exhibit 204 -

A. Yes.

Q. What is this 1, 2, 2½, 3, 4, 5 and 10 percent based on?

A. That is the rate of depreciation taken on the assets. In the property account assets aggregating \$1,842,000 odd are depreciated on a basis of 1%, and so on.

Q. I just want to get at the basis. The Company has separated classified as to dollar value portions of its depreciable assets and ascribes to each a different depreciable ratio?

1. Yes, and different life time.

Q. And you have taken that as the basis?

A. Yes.

Q. And that is what this indicates?

A. Yes, and the details are in the Schedules.

Q. What is this item of Sinking Fund?

A. It is a sinking fund basis of depreciation, and I have also referred to that in my report, Exhibit 204, on page 23 at the bottom of the page.

Q. I won't bother you with the reading of it; I just wanted the reference.

A. Starting with - "The charge of \$212,000.00 for the Rolling Stock Company is based on the annual payment of principal of the serial bonds, issued in respect of these cars. --- For the year 1944 these payments were as follows:" And then follows the explanation.

Q. All right. Then you go on with that, on page 24 is it?

A. The bottom of page 23.

Q. And then you go on to page 24?

A. Yes, of Exhibit 204.

Q. And what you are referring to is the sinking fund method of depreciation used with respect to rolling stock?

A. That is correct, and that is the asset that is in question.

Q. Now did you at all examine into the various amounts separately classified this way, as to the ratio of depreciation that would be allowed?

A. You mean, endeavor to place them?

Q. Yes, for instance where it is indicated here that of the Forty-Eight Million Dollars total assets, approximately Eighteen Million or so depreciable assets, where the figure \$1,241,000 odd is said to be depreciable at 5%, - have you been able to go into any details or particulars that enabled you to say whether that allocation is the correct and proper one, or have you merely accepted the Company's division?

A. We have accepted the Company's division, and the particulars of that division are shown in the Schedules in the Report.

Q. You mean in the document marked "A" for identification?

A. Yes, and I can refer you to the Schedules if necessary, but at the same time I pointed out in the report, reading at the bottom of page 24 of Exhibit 204" - "The rates of depreciation adopted by the Company are not in excess of those allowed by the Dominion Income Tax Division. We feel, however, that for the purposes of your Commission, Engineering opinion should be had as to the rate at which these properties should be depreciated."

BY THE CHAIRMAN - You also express an opinion in the first paragraph on page 24 regarding the asset of Rolling Stock?

A. Yes, Sir, on a sinking fund basis, which is not related to the actual asset itself.

EXM. BY MR. COHEN (continued)

Q. In that case, if I may pick up the point, at page 24 you make the statement, referring to a portion of the assets - "We are of the opinion that the depreciation charge is 'excessive'".

A. That is right.

Q. "And should be related to the expected life of the asset"?

A. That is true.

Q. When you say that the amounts of depreciation adopted by the Company are not in excess of those allowed by the Dominion Income Tax Division, you are not suggesting finality as to that feature as to any money relationship between the company and the Government in the last two or three years as contrasted with the suggestion that there is no finality with other things?

A. The Income Tax Department have allowed this amount of depreciation in past years, and I don't know of any reason why they should not continue to do so, but the statement we make here is that it is not in excess of those allowed by the Dominion Income Tax Division.

Q. You mean the amount allowed by the Government, or the Income Tax Division, to this particular company?

A. Yes.

Q. Going on to the portion of your report that deals with Profit and Loss, you divide the period 1930 to 1944 into three divisions?

A. That is right.

Q. How does the selection of those particular years come about?
Just your own opinion of them?

A. Yes. For the purposes of comparison we felt that 1930 to 1935 might be regarded as a depreciation period, and 1936 to 1939 as a standard period; that period being recognized by the Income Tax Department as standard for Income Tax purposes is ascertaining standard property.

Q. And the basis for determining the responsibility for payment of excess profit tax?

A. Yes. And then the period 1940 to 1944.

Q. With respect to the years 1936 to 1939, that is the period that is used to determine the standard profit which is considered a company would be making in relation to which one calculates whether or not there has been excess profits?

A. That is right. It is merely for identification.

BY MR. FORSYTHE - I am just wondering if there is not a possibility of prolonging the hours of sitting a little. At the rate we are proceeding now it does not look as if the goal is going to be reached.

4:30 P.M. HEARING ADJOURNED UNTIL 10:00 A.M. THURSDAY,

SEPTEMBER 20th, 1945.

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